HOW TO TEACH

OR

PHRENOLOGY

IN THE

SCHOOL ROOM

AND

THE FAMILY


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HOW TO TEACH

ACCORDING TO

TEMPERAMENT AND MENTAL DEVELOPMENT;

OR,

PHRENOLOGY IN THE SCHOOL-ROOM

AND

THE FAMILY.

By NELSON SIZER.

AUTHOR OF "CHOICE OF PURSUITS; OR, WHAT TO DO AND WHY;" "MARRIAGE VINDICATED AND FREE LOVE EXPOSED."
ASSOCIATE EDITOR OF THE AMERICAN PHRENOLOGICAL JOURNAL; VICE-PRESIDENT OF, AND INSTRUCTOR IN THE AMERICAN INSTITUTE OF PHRENOLOGY, ETC.

"The most important point in the study of Man is a knowledge of his Nature; and the next, to discover the mode in which his physical and mental constitution may be most advantageously improved."—SPURZHEIM.

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PREFACE.

An attempt is made, in this work, to aid parents and teachers to understand the talents and dispositions, as well as the constitutional temperaments of those committed to their care, and to point out a more successful way to guide, control, and educate them.

The author feels certain that his purpose will be approved, and entertains the hope that those whom he addresses will find something which they may profitably learn and apply. During more than thirty years, he has labored by means of public lectures, by the pen, and in more than a hundred thousand personal consultations, to set forth the principles of mental development, culture and training, and to show how the bodily conditions may be so regulated as to secure health, happiness, success, and long life; in short, how to make the most of each human being, both in body and mind.

The aim of this work, therefore, is to give the reader the results of a long course of observation, study, and practice, with the hope that its teachings may become a perpetual benefit to all generations.

New York, *March* 12, 1877.

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DEDICATION.

To the Memory of

MY MOTHER,

WHO DID MORE THAN ANY OTHER PERSON TO MOLD MY CHARACTER,

AND ALSO TO THAT OF

SAMUEL BELL,

THE BEST TEACHER I EVER HAD;

AND TO ALL

PARENTS AND TEACHERS,

ON WHOM DEVOLVES THE DUTY OF TRAINING THE EMOTIONS AND EDUCATING THE INTELLECT

OF THE YOUNG:

A WORK AT ONCE AS EXALTED IN AIM AS HUMAN HOPE, AND AS IMPORTANT IN RESULT AS HUMAN DESTINY,

This Book,

PREPARED WITH A DESIRE TO PROMOTE THEIR SUCCESS, AND TO MAKE THEIR PATHWAY CHEERFUL AND BRIGHT,

IS AFFECTIONATELY INSCRIBED.

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HOW TO TEACH;

OR,

PHRENOLOGY IN THE SCHOOL-ROOM AND THE FAMILY.

A CORRECT system of education, and the successful application of right principles to this great work of human life, is a subject of importance second to none. Though the parent is the natural educator of children, society has become so organized that the profession of teacher largely covers many of the duties properly belonging to parents; but, as many parents are occupied with duties that absorb so much of their time and care that they can not properly attend to the education of their children, and some others, unfortunately, are not themselves sufficiently cultivated to do justice to the subject if they had the time, it is, doubtless, on the whole, an improvement to civilization and an aid to good morals that persons should be set apart for the profession of teaching whose talents, dispositions, and culture shall thoroughly qualify them for the work, and it is no exaggeration to say that no other class of persons perform more important duties to society and the world than capable and faithful teachers.

Of course it follows that teachers should acquaint themselves with everything that can aid them in the best performance of their great work, and what else does one need so much, after he has acquired a sufficient education to qualify him to understand and to communicate knowledge in the various branches which he is expected to teach, as to understand the being whom he has to instruct? No

man of sense would send a horse to be shod by a man sim ply because he had the strength to shape the shoe and drive the nails. It would be expected that the horse-shoer should understand not only how to make a shoe and a nail, but something of the structure of the foot, and how to apply the shoe and the nail in such a manner that the foot should receive not only no damage but benefit. A man who should undertake to make a boot, a hat, or a coat, without some training in respect to the subject-matter of his efforts, would be hurried into some other neighborhood or pursuit.

RANK OF THE TEACHER.

The teacher stands deservedly high among workers, because the duty assigned him is so vital to the well-being of his pupils and the public. If a man mars a boot, or badly shoes a horse, the damage may be estimated, and, perhaps, by wiser hands corrected. But if he who undertakes to train the mind and educate it for the duties of life fail in his work, he inflicts a damage that transcends estimation. We hear men say, "My education is poor; I went to school, but the teacher did not understand my disposition or know how to impart instruction to me, therefore I learned to hate him and the school and my books, and here I am doing drudgery because my education is poor."

If the science of mind has any claim to truth, why should not the teacher avail himself of all the light it can afford? What, then, is its value to the teacher? It is evident that the teacher needs to know the nature of his pupils, and how best to open the pathway of knowledge to each one, as well as how to control and regulate the conduct of all. Nor should the teacher be obliged, as at present, to wait weeks and months, and, perchance, years, before he finds out all the peculiar traits of his fifty or one hundred pupils.

If Phrenology enables one, who understands it, to glance over a class of boys and girls and read them almost instantly, so far as the outline and strong features of their characters and talents are concerned, it offers to the teacher a basis of success and usefulness which can hardly be estimated.

It is claimed that persons of certain temperaments or conditions are adapted to study things and practical subjects; others are better adapted to philosophize and think, and others to exert themselves physically. One of the first things to be done in the teacher's mind, if not in the organization of classes—and it might be done with classes, perhaps—is to select the pupils and classify them according to temperament or constitutional peculiarity. Put the quick with the quick, and the slow and the plodding together. We classify a team of horses in that way. Brisk, sharp-eared sorrel nags are harnessed together and they trot in unison and are happy; while the broad-backed, square-shouldered, heavy trucksters, with their dark color, thick skins, and legs like mill-posts, are assorted and harnessed together, and they walk, pulling their heavy load, keeping time to each other's slowness, thus maintaining their flesh, health, and usefulness.

But we classify our pupils less wisely. The sharp-featured, blue-eyed ones, with prominent brows and retreating foreheads, who see the points that are presented and grasp them as quick as chickens will pick up corn, are placed alternately among the dark-complexioned, broad-backed, sturdy, moderate pupils who think slowly, move slowly but strongly, and require time to think. Of course, the brilliant ones obtain the head of the class and answer all the questions that come within reach of their style of mind; while these slow, solid subjects maintain a steady adherence to the foot of the class, and don't care. They

get it into their heads that they are not very sharp, and that it is of very little use for them to study. If the quick were placed together, and the slow together, then it would be quickness against quickness and slowness against slowness. There would be equality at least in the physical conditions.

The teacher ought to know that the boy who is well developed in the upper part of the forehead and moderate across the brow, has to do with ideas rather than with facts and things, and that he must be taught altogether differently from one who is prominent at the brow and retreating in the forehead. We might as well undertake to put all people in the same sized hats and coats as to try to teach all in a single class.

DISCOURAGEMENTS OF TEACHING.

It is no wonder that teaching is a drudgery, and that the noblest profession in the world should be so unsatisfying in its results to those who follow it. It can hardly be disputed that in nothing else is there such need of knowledge of mental philosophy or power to read character, yet many of our teachers are wanting in the right means of undertaking the duties of their positions.

Navigation is studied in the right manner, and its students have practice which is adapted to that profession. So of engineering, architecture, manufacturing, commerce. True, men often get into wrong places and mar all pursuits; yet men in business are instructed toward the very duties they are expected to perform. But who teaches the teacher? Who tells him how to read character, motives, dispositions, talents, peculiarities, and the temperaments of his pupils? Who puts him in possession of just that knowledge which he ought to have in order that every stroke may win victory and forward him in the great errand of his life?

Some teachers have learned how to read mind, to understand a class of pupils in a single day's observation. Some have learned how to encourage one and guide another, how to control each one according to his peculiarities. The teacher who knows this, as the musician knows how to bring out harmonies from the instrument, is the one who can teach easily and successfully, and proves to be the true teacher. Teachers should learn, then, how to estimate character, how to read the dispositions of each pupil, and how, therefore, to manipulate each one in the best manner to secure the highest success.

Teachers who have to deal with mind need a rule to judge of mind, talent, and character. If Phenology explains mind better than any other system of mental philosophy, the teacher should have the benefit of it. Since no one ever presumed, before the discovery of Phrenology, to predicate the character of a stranger at all, and men have contented themselves with an endeavor to explain mind in the abstract; and since scarcely any two systems of mental philosophy have ever agreed as to the number of the faculties, or the mode of their operation, the teacher must look to something else besides the old-school mental philosophy to obtain such aid as seems to be necessary, in order to adapt his teachings wisely to the different individuals who are presented to him for instruction.

OLD WAY OF STUDYING MIND.

Looking at pupils through the light of the old systems of mental philosophy, he would say of them, they must possess "perception," "memory," "judgment," "will," and "understanding." Falling back upon his knowledge of people whom he has known, he may safely conclude that these pupils before him are not alike in regard to *perception*, *memory*, *judgment*, *imagination*, *will*, and *un-*

derstanding, but which of them has the perception stronger or weaker, which has memory retentive, tenacious, all-comprehending, and which is deficient in this respect, his old system does not tell him. It gives him no clue, furnishes him no hint. The pupils look up to him with open-eyed confidence and respect, and he expects, or at least hopes, to make shining lights of all of them; but through what windows they will shine, through what faculties they will reflect credit upon his instruction, he has not the slightest idea. Of course his pupils look at him, and he returns the gaze; they wonder what sort of a man he is. He is entirely at sea in respect to them. They have come to him for an education, for guidance, training, culture, and he honestly desires to discharge his duty faithfully, and make his labors successful in the development and culture of each of them. But he must begin the work in the dark. As he does not know the differences in his pupils, yet presumes there are differences, he strikes upon an average rule of instruction, perhaps, and subjects the whole class to that rule; and why should he not? Since he does not know their talents and character, and has no idea of the peculiarities of their dispositions and mental capacities, of course he must experiment.

NEW WAY TO STUDY MIND.

Let us change the scene. Introduce to that class a teacher who is thoroughly versed in Phrenology, who can see at a glance which pupil depends largely upon his perceptive faculties, which has a retentive memory of facts and places, of words and things; which has the cogitative, reasoning cast of mind; which must have ideas, principles first, before the facts become understood to him, or before he will consent to listen to them, or seek to treasure them; which has the sharp, analytical, self-understanding, self-instructive cast of mind; and if that teacher were to fol-

:ow the suggestions of *his* mental philosophy, he would take all the pupils with large perceptive organs, and put them by themselves; would take the philosophical and reflective pupils, and group them.

Then he would go over the school and see who had the active, mental, studious temperament, and who had the heavy, the dull; who were the slow and retentive, who the brilliant and the quick, and he would make another classification; and instead of having thirty pupils in a class, embracing all varieties of mental peculiarities, he would have, perhaps, four or five together, and then instruc- each small class according to their united resemblances in mental development; and the explanations and reasonings which he would give to each of these sub-classes would be peculiar, and adapted to their peculiarities, and not adapted to any other class. Does any one need to be informed that such a teacher would push each of these little classes much further ahead, and with much less friction to himself and to the pupils than could possibly be done if they were all grouped together?

PEOPLE WISE IN SOME THINGS.

The present method of teaching, without any just appreciation of the mental peculiarities of pupils, by thus massing them together and applying a similar line of instruction to all, is just as wise as it would be if one had a thousand horses to drive from Chicago to Boston, if he were to attempt to drive them all together. A hundred might be able to travel fifty miles a day, another hundred forty miles a day, and other hundreds would travel thirty, twenty-five, or twenty miles a day.

If these were all to be started together in one great drove, the good travelers would not half work; they would lounge along carelessly, and be twice as many days on the road as would be necessary to reach their destina-

tion. The drivers seeing that some appeared to travel easier, and get along without trouble, would feel annoyed at those that were sluggish and slow, and would all the time be hurrying them and trying to keep them up to their work, and when the horses reached Boston, one-third of them would look jaded, and, perhaps, would not sell for half as much money as they would have done had they been driven according to their proper speed. It is easy to see that the first hundred horses should have been in charge of the proper number of attendants, and sent "kiting" on to Boston at the rate of fifty miles a day, saving half the time of the grooms and half the expenses for feed and entertainment of the horses; and the drove should thus have been divided according to their natural speed. Then no group would be in the way of another, but each being kindly and patiently treated, the slow ones suffering no abuse, no hurrying and fretting, all would finally reach the market, and be in a proper condition for sale. A wise horse-dealer would adopt this course. Now let this thought be applied to pupils, and its reasonableness, we think, will be appreciated.

COLLEGE STUDENTS.

Experience has shown that some pupils can be prepared for college by the time they are fifteen, and graduated before they are twenty. Others require assiduous training and culture until they are twenty before they can properly enter college, and then they ought to have five or six years instead of four to graduate; but these slow-ripening apples are very apt to get the best places at last. These stanch, steadfast, moderate thinkers may become the wise and controlling minds of the future, the judges and the bishops of church and state. It is said that Daniel Webster was not a brilliant scholar, that he gave far less promise in college than the average of the students. Sup-

pose he had been called a numb-skull because he could not learn as rapidly as others, and had been sent out of the school in disgrace. Hundreds of boys and girls have been discouraged by similar treatment from teachers and class-mates, and have carelessly fallen out of the ranks of scholarship, and expressed a preference for going to work; whereas, if they had been properly understood and rightly instructed and treated, they would have been, at twenty-one, sound scholars, and at thirty-one superior to nine-tenths of those who were brilliant as students.

This case need not be argued; the bare statement of it is sufficient to show its force and the desirableness of the course suggested. There is no subject which lies so near the foundation of the progress and improvement of society as that of education, and we solicit candid investigation of the subject in the light of Phrenology and Physiology, which constitute the key to the highest and most permanent results.

WHAT THE TEACHER SHOULD BE.

When we consider the duties required of the teacher —the amount of labor, care, anxiety, patience, and worry which attach to the profession, and when the amount of talent, knowledge and wisdom absolutely essential to the highest success are taken into account, the question naturally arises: "Who is sufficient for these things?"

As to what the teacher should be, constitutionally, we may say, it is eminently desirable that he should be well-organized in every respect, both bodily and mentally. He should have an energetic, enduring, and elastic constitution, which can work easily, and work long, and maintain its strength and activity. A person who is constituted like a slack-twisted string, like soft and porous wood, or like mellow metal that is easily impressed. and who has a

eharaeter eorresponding to such eonstitutional qualities, has no proper plaee in the sehool-room as a teacher. He should have the eharaeteristics of the fiddle-string for toughness and density, of the steel-spring for elasticity, and of oak and hiekory for sturdiness and enduranee.

With these strong qualities there should be mingled suseeptibility, sympathy, power of adaptation and conformity; in other words, there should be a strong and aetive temperament; the Motive and Mental temperaments predominating, with enough of the Vital to convert food into nutrition rapidly and abundantly, in such a manner as to sustain both the physieal and the mental powers. This would give ample support for all the duties pertaining to his labor, both of mind and body.



Fig. 1—THE GOOD TEACHER.

We introduee an engraving representing the good teaeher. It is remarkable for the amplitude of the lower and middle seetions of the forehead. If a line be drawn square aeross the brow to the outer angles, and two other lines be drawn from the corners of the brows to the top of the forehead, just where the hair is parted in the eenter, thus forming a triangle, it will embraee that part of the head whieh Dr. Gall in his early studies of Phrenology denominated the region of "Edueability." The separate organs for aequiring education loeated in that region of the forehead have sinee been diseovered and named. His was a generie idea full of meaning and of truth, and time has fully proved his wisdom and sagaeity.

"EDUCABILITY."

The perceptive organs, located across the brow, seem to be prominently developed in the portrait, while the mid

dle section of the forehead, and the central portion of the upper part of the forehead are very strongly developed. In other words, the region of "Educability" is largely developed. By this term Dr. Gall meant the power of acquiring education, the ability to gather knowledge and information, and to analyze and remember it; and this set of faculties is very marked in our illustration. The forehead has something of a retreating appearance, but this grows out of the fact that the head is very long from the opening of the ear forward to the root of the nose, and the lower part of the forehead is therefore very strongly developed. The perceptives somewhat predominating over the organs in the upper part of the forehead, serves to give it a retreating appearance. The eye, it will be seen, is full and prominent, as well as large, and there seems to be a fullness, or sack underneath the eye. This prominence of the eye and the fullness below it constitute the sign of a large development of Language, which gives the power to explain fully and easily what the person thinks, knows, or feels. The teacher especially needs this faculty, for one may be ever so wise, may be rich in all the knowledge and information pertaining to scholarship, and not be able to communicate it.

FORCE OF CHARACTER.

The head also appears to be broad in the region of the ears, indicating courage and force of character, which the teacher requires in order to command respect. We find also the crown of this head, and that part which is located a little forward of the crown, to be large, showing ample Self-Esteem and Firmness; hence there is dignity self-reliance, independence, stability, and steadfastness and the power to wield government with stately ease, and strength. Such a person has weight of character, as well as courage to impress it upon others, and it would enable

the teacher to carry himself in the presence of pupils in such a way as to command their respect, and thereby secure their obedience without any friction or worry on his part, and with little thought of rebellion or disobedience on the part of pupils.

MORAL ORGANS REQUISITE.

The teacher should also be well developed in the top head, or the region of the moral organs, so that he may be kind, just, upright, and capable of impressing his pupils not only with his authority, but with the justness and the forbearance of his government. Nothing so seriously impairs authority anywhere, and especially so in school, as an exhibition of tyranny, unreasonable anger, unjust partiality, or favoritism in any form; and if the teacher also have large Veneration combined with Benevolence, he will not only be kindly and respectful, but devout in his bearing, and thereby enforce upon pupils the thought that there is a Higher Power, even above the teacher, and that an active and sincere reverence for authority is not a mean submission, but a virtue.

POLICY, PRUDENCE, SELF-CONTROL.

The wideness of the middle section of this head indicates a full degree of the organs of Secretiveness and Cautiousness, which serve to give prudence, and a proper control of the feelings and expressions. Though the teacher should be free and easy in conversation, he needs that sagacity and reticence which is able to regulate his words and countenance; he should be able to "be angry and sin not," to feel annoyed and not show it; or to be delighted, or chagrined, and not have the pupils read the state of his mind. Nearly all teachers will readily remember incidents in which something superlatively droll or ridiculous has happened, that strongly provoked laugh-

ter, but which, if indulged in by the teacher, would break up all order in the school, and set the fun-loving children wild with merriment.

The poor teacher has a head very different from the other. It is wide at the temples and forehead, and runs back to an edge at the rear, becoming thinner and thinner. Though there is considerable meditative power indicated by the upper part of the forehead, which gives the ability to understand theories and appreciate principles, yet the lower part of the forehead is not very well developed. He is neither practical nor brilliant. Notice, also, how small the eye is, and set far back, indicating small Language. A lack of power to appreciate particulars, and deficiency in the ability to express himself, are marked on the whole face and forehead. He has a dreamy, stupid look, as if facts were slow to impress him, and tardy and weak in expressions. Observe, also, how the top line of the head slopes backward, indicating small Firmness and Self-Esteem. The crown of the head is low and light. He lacks dignity and determination; he lacks sprightliness of thought, and power to talk and teach. His head, from which was procured a photograph to be engraved, is very narrow at Destructiveness, just above the ears, and at Combativeness, just back of that point, and he is deficient in courage, force, and energy. He lacks also that strength of the social affections which is necessary to give deep and



FIG. 2—THE POOR TEACHER.

tender love for children, and which is requisite to call out their sympathy and love, and make them feel that the teacher is a friend as well as an instructor. This head, then, is thoughtful, slow, sound, and sympathetical, but unpractical, lacking in self-respect, pride, ambition, and in those faculties which give force, energy, and thoroughness, and the power to command and to control. Such a teacher would be a failure in the matter of giving instruction, even though he might pass a good examination as a scholar. He would also lack the governing and supervising forces that would insure respect and enable him to carry the school onward in an orderly and successful manner. We need hardly add that as a teacher, fig. 1 would be cheap at any rate of compensation, because he has a favorable temperament and such mental developments as qualify him to obtain knowledge rapidly, understand it clearly, remember it tenaciously, and explain it quickly and fully; while fig. 2, though he might possess scholarly knowledge, it would be like the richness of dried quinces, reluctant to come forth, and he would be dear as a teacher at any price.

WOMEN AS TEACHERS.

If a woman must earn her living in the performance of duties other than those which belong to domestic life, we regard teaching as the best occupation for her as a whole. It demands, in the first place, good culture, which, in itself, is a desirable acquisition, and eminently useful to her in any department of life, after teaching may have been abandoned; so that the acquisition of education, such as may qualify her for a teacher, will not come amiss, though she might not engage in that calling, or continue in it permanently as a life-pursuit. With the exception, perhaps, of medicine, we think a woman ranks higher to be engaged in teaching than in almost any other occupation

which she could follow as a means of earning her living. Probably it would be found, if inquiry were made, covering a given number of years, that more teachers find themselves invited to desirable positions in society through marriage than from any other department of industry.

TEACHERS PREFERRED IN MARRIAGE.

Of course there are some reasons for her preferment which may be taken into account besides the position of teaching which she occupies. In order to be a teacher, she must have brain-force to acquire an education; and to enable her to succeed in teaching she must have vigor of body to give support to that brain; and these two conditions, from which come clearness and force of mind and physical endurance, make her superior to most women. Besides this, it is an intellectual profession, and tends to give a woman more culture and power in her personal contact with society than she otherwise would have. There are many men of first-rate talent who have had less education than is desirable, and they feel the want of it; yet having been successful in business, and having attained to a higher position in society than their educational attainments would seem to warrant, they feel inclined to make up the deficiency, or rather, so far as may be, supply the lack of their own education by obtaining a wife who has been educated. Such a man, by selecting a successful teacher for a wife, obtains in her, strong common sense, energy of character, and mental culture, which are great advantages to him, and much more useful, indeed, than would be the more artistically educated one, though an adept in elegant manners, trained in luxury, and passively carried forward by the current of social influences, without any serious exercise of intellect, talent, skill, and force. Besides, the teacher, like himself, has not been raised in luxury, but has been obliged to think and work, and knows

how to appreciate a man who, though he lack culture, has the talent to make his mark in the world.

INFLUENCE OF CULTURE AND ECONOMY.

Moreover, a teacher acquires a certain earnest, straight forward strength of character, that enables her to command respect, especially from sound, thinking, business-men, and more especially so from men who have been professionally educated. She thus learns to be self-sustaining, to despise sham, and pretence, and all that is soft, deceptive, and hypocritical, and thereby impresses men of sense and of strength of character with the idea that she would, indeed, be a helpmeet, and not a drag and a dead weight on their prosperity. Many a clergyman is wise enough to pass by the butterflies of fashion who have been educated in the ornamental branches to be merely elegant and extravagant pets, and wisely seeks as his companion one of those noble girls who has gained strength and culture in the profession of teaching, who would not be too proud to lighten the burdens of life with domestic industry, as well as to cheer and encourage him in his labors by a sound and vigorous intellect.

A GOOD HEAD FOR A TEACHER.

Though this engraving shows the form of the forehead, the strength of the features, and the power of character, it hardly does justice to the original in smoothness and delicacy of expression. But here is a forehead that would carry knowledge and communicate it, that would gather facts, remember and impart them, that would analyze, discriminate, illustrate, and reason. What fullness in the outer angles of the brow, where Order and Calculation are located! What fullness across the middle of the forehead where Eventuality, or memory of facts, and Locality or memory of places, are situated! What a broad fore-

head in the upper region of the temple, how massive on the whole! what generous strength of face, what courage, what endurance, and determination are depicted!



Fig. 3—Mrs. E. P.—A Strong Character.

Her eye is full, and her Language is sufficient to enable her to talk and write well. That head would make a first rate mathematician, and would impart knowledge in such a manner as to impress it upon the pupil for life. She takes in all surrounding knowledge, remembers facts, places, faces, and experiences with remarkable clearness; and, fortunately, she has body enough to give support to her brain, so that there is vigor and endurance, both to the body and to the mind. She has a remarkably strong character, and if her history were given in connection with her management of hospitals for soldiers during the war, in which she spent thousands of dollars, and manifested eminent organizing and governing ability, her character as an able and large-hearted philanthropist would command the highest respect.

OVER-WORK OF BRAIN.

As society is at present organized, American girls who take to books and culture are very apt to develop the brain at the expense of the body while growing up to womanhood, and those who attempt liberal culture and professional duty are very liable to over-work with the brain, and break down through lack of that proper support which would come from a healthy and well-developed body. Teachers, therefore, should endeavor to cultivate physical strength and endurance as a basis on which the mental and moral qualities can be exercised. Though we have known a good many successful teachers who were neither large nor strong physically, yet certain it is that size and weight, added to talent and culture, are no mean factors in the great work demanded of the teacher. A grand, personal presence has its advantages. One who is small is necessarily obliged to make up in tact, wisdom, and talent for the lack of power and presence, or fail in exerting the requisite amount of influence; and it is no disparagement to those who are slight, slender, and measurably deficient in muscular strength to say that it would be all the better for them if to their talents they could add size and physical power. There is a certain respect paid to size as a sign of power, especially by boys whose law is that of muscle; and though many can govern well by wisdom and sagacity, they could govern all the better if they had excellent bodily proportions. He, or she, therefore, who would be teachers, and who are fortunate enough to possess the best physical development in connection with excellent mental capabilities and culture, should rejoice and be thankful.

PLEASANT FACE AND VOICE.

It is also desirable that the teacher should have a pleasant countenance, and especially a pleasant voice. A calm,

generous, and benign expression of face is very soothing in its influence; while a sour, frowning face casts a chilling shadow wherever its influence falls. If there is anything that signally disturbs the harmony of a school, and provokes acrimony, and sets the nerves of every pupil in a state of irritation, it is the rasping voice of an irritable teacher. We have known some men whose voices sounded like the barking of a dog, and some women whose voices, to say the least, were not soothing to sensitive nerves. Though there are natural differences in voices as to relative mellowness and melody, those that are least smooth, rich, and sweet, can be modified by effort; for it will be observed that persons with unfortunate voices frequently assume pleasant tones when they feel pleasantly, and have an agreeable mission to perform. Let the disposition, then, be kept as sweet and amiable as possible, especially by those whose voices are unfortunate in their tone and key.

OBSERVATION AND MEMORY.

It is of great importance that the teacher should be well endowed in the realm of mental development. The perceptive organs, located along the brow, should be large, so that the mind shall be quick to take in all the phases of the surroundings, and shall see all that is going on among the pupils. A person amply developed in this region carries his knowledge as it were in solution, and can recall on the instant all he knows of a subject. If a teacher is obliged to ponder and cudgel his brain for an answer when a pupil asks a question (see fig. 2), there may be half a dozen pupils in the school who will have the answer ready before the teacher gets it. How much respect will they have for such a teacher? A smart boy or girl very soon comes to think, if the teacher requires a long time to recall his knowledge, that he is not really the mental

leader in that school; but if the teacher carries in memory all he knows, and can launch it forth the instant he is asked, (see fig. 1), every pupil in the school, and especially the dull ones, will think he is the prince of knowledge, and he will be likely to command the respect of all. The middle and upper portions of the forehead, in the regions of memory and reflection, also ought to be large. In short, the teacher ought to have a practical, a historical, and a reflective cast of mind. All his faculties being well developed will enable him to be master in every field of knowledge, and he will not only be able to lead the school in all its departments, but command the respect of those most advanced and most brilliant, and this is a point of great importance to the teacher.

TALKING TALENT—SOCIABILITY.

The teacher should also have a full and prominent eye, which indicates facility of expression (see fig. 1), in order that he may be able to explain with ease, vigor, and gracefulness whatever he may know. He should also have a full back-head, where the organs of friendship, and affection, and love for children are located. He who can not gain the love of the pupils and awaken their friendly regard, is not likely to win their intelligence or hold their respect. A teacher may have breadth of mind and rich ness of culture, but if he lack the ability to talk as well as think; if he can not express what he knows freely and promptly so as to instruct and edify, he is out of his place. He is like a pencil without a lead, or a musician without voice.

There is less training of students in the matter of oral expression than is needful; especially with those who are not by nature adepts in talking, or those whose diffidence tends to keep them silent. The good talkers monopolize in school and elsewhere the opportunities for speaking,

and teachers permit oratory to be an ornament to the school rather than a matter of utility to the persons who are not gifted with free speech, and they are glad to have the "poor speakers" not wish to speak, and fail to encourage them if they desire to try. The result is a few speak well, but the majority are silent, or awkward and embarrassed if they attempt speaking, and many are thus made to suffer besides themselves.

GOVERNING POWER WITHOUT MIGHT.

The teacher should have a high crown of head to give ambition, dignity, determination, and the power to govern. (See deficiency in fig. 2, page 21.) Some persons even of slight proportions will govern a school with a wave of the hand, a mere suggestion seems to come with such expectation of being obeyed that it is obeyed. The very tone has authority in it, yet it may not be rough, boisterous, or pugnacious.

The author once employed a teacher for a winter school where there was a considerable number of large boys, broad-shouldered sons of farmers who had been accustomed to behave rudely, with impunity, and sometimes had threatened to carry the master out of the house, merely for the rough fun of the thing. The teacher we employed was a girl of twenty-two that weighed ninety-five pounds, but her head was high at the crown and not very broad at the base. She was dignified, upright, firm, but not passionate nor uneven in temper. The wise men of the district were alarmed that a girl was to be put into the school as teacher, and especially one of such slight organization. The writer recognized her character for dignity, morality, intelligence and self-possession; and, as he expected, she worked that school till spring without a ripple of disorder or disobedience. She had no bluster, no loud talking, no confusion of thought or purpose, and pro-

voked no opposition or anger by rudeness of speech. The pointing of her finger at some great boy grown to man's weight and stature, would make him cower and seem to say, "Pray what have I done, what do you want, how shall I adjust myself to your wishes?" and when he found out that his long legs and coarse boots were sprawling in an awkward manner, and that was the only trouble—he readily adjusted himself, when a dignified inclination of the head of the teacher would seem to say, "that is all," and she would quietly walk on. The people of the district wished her to teach the school the next summer and the next winter, and the parents as well as the pupils learned a lesson.

"Not by might nor by power, but by my spirit," is a thought as applicable to human as to Divine government, and is often exemplified in the home, the shop, and the store, as well as in the school-room.

MORAL QUALITIES.

The teacher should have a high head to give morality, dignity, justice, reverence, benevolence and sympathy. These will enable him to awaken the higher sentiments in the pupils, and to fill the school-room with an atmosphere of serene uprightness. The teacher who goes into the school with a broad, low head, and seeks to battle his way to victory, will arouse every element of battling in every pupil who has courage enough to battle anywhere, and it will be might against might. Such a teacher will stir up all the low propensities of the pupils, and God help him and the usefulness of his school when he seeks to bruise his way to success.

RECAPITULATION OF ENDOWMENTS.

The teacher, then, should be robust, and healthy, of ample dimensions. Though, as we have intimated, small

persons sometimes can govern well, but they would be all the better if they weighed one hundred and forty instead of ninety-five pounds, with the same head to think and work. The teacher should be also quick of perception, retentive in memory, sound in philosophic understanding, sympathetical, respectful, upright, hopeful, persevering, steadfast, dignified, ambitious, and affectionate. In short, the more there is of the teacher in harmonious mental vigor, and in extended and minute culture, the better. The teacher should have an equable temper, a pleasant voice, and self-control. We think good government is greatly promoted by a low-toned voice, indicating that the teacher is not hasty or angry, or in any way exasperated, and as if he expected obedience without noise or force. It would thus seem that a teacher needs an excellent organization, mental and physical, and that he needs to carry all the Christian graces in a spirit of wisdom.

WHAT THE TEACHER SHOULD KNOW.

The teacher should understand human character as taught by Phrenology, and be able at a glance to comprehend the leading traits of each of his pupils. He should understand the temperaments and their influence on the character and talents; should know that a blue-eyed, sharp-featured boy or girl will be nervous and restless, and sometimes disturb the quiet of the school, and be very quick to get a lesson, especially if the lower part of the forehead be prominent and the eye be full; while a dark, sturdy, tough organization will be slow but sound, and will require patience and numerous explanations from the teacher. A high, square forehead will be comprehensive but not quick, unless the temperament be very active. A child with a high, broad crown of head will be ambitious and very sensitive to praise, while one low and small in that region will need much encouragement. One with a

low, broad head will be selfish, tricky, deceitful, and sulky if provoked, or cruel if enraged. The teacher should know how to detect all these and many other peculiarities in order to treat each one in a way best adapted to produce the desired result.

EDUCATIONAL ATTAINMENTS.

The teacher needs to know thoroughly all he is expected to teach; and while young teachers are being trained in the primary departments for future usefulness in the advanced classes, they should be pushing their own studies to perfection, and qualifying themselves for teaching in the higher departments, so that when they enter upon a higher grade of instruction there shall be very little to be learned in that field of inquiry.

The teacher who has to study nights to keep out of the way of his advanced class, has double work to do, and is not really qualified to teach well that which the night before he has learned with his brain tired by the weary work of the day; and in so far as he thus lacks the ripeness of knowledge and the power to impart it with self-poised vigor, he is a fraud and a false pretense.

A TEACHER "FRESH FROM HIS CLASSICS."

Some twenty years ago a young man came to the author and engaged to take lessons in phonography of our shorthand writer, stipulating that he must have his lessons Monday and Thursday evenings without fail. We afterward learned that he had engaged to instruct a pupil on Tuesday and Friday evenings, receiving for giving the lessons the same sum that he had paid us; thus obtaining a lesson Monday and transmitting it Tuesday to his student, never having laid up a single fact ahead. His student sometimes would ask him questions in regard to advanced portions of his text-book, such as the *l* hooks and *n* hooks,

when he was suddenly and gravely informed that his proper course was to confine himself strictly to the lesson in hand; that much better and surer progress would be made in that way, and that when they came to the *l* hooks and *n* hooks, it would be time enough to get information as to them.

Old lawyers, old doctors, old ministers are applied to for their wisdom because they have had time to learn. Let the young teacher while engaged in primary instruction push forward inquiry, and become thoroughly familiar in the fields of knowledge which are to be occupied at a later stage, and thus the standard of instruction will be raised, and teaching will become what it ought to be, not only one of the most necessary, but one of the noblest of professions.

WHAT THE TEACHER IS TO DO.

If the teacher can be what he should be, and know what he ought to know, the field of doing will be well tilled, for if he be honest, and that is one of the prime ingredients, he will feel an earnest sense of duty to fulfill his obligations to the best of his ability to pupils, to parents, and to the public. He will not be satisfied simply to go over a given curriculum of study and advance the pupils in that; he will feel it necessary to imbue them with a high and holy hope of success and usefulness in the employment of the knowledge they acquire.

THE INTELLECT NOT THE ONLY FIELD OF THE TEACHER.

We see no reason why the teacher should not also be a moral instructor, or why the soul and the manners should not be elevated and refined. The intellect is not the teacher's only field of effort; for while he is imparting the facts of knowledge and the deductions of philosophy, layer by layer, as the mason lays brick, why should not these

facts of knowledge and the conclusions of reason be properly cemented by the mortar of morality, so that the mental culture shall not only be grand in its intellectual attainments, but solidified with principle, and built up in moral power.

TRUE DIGNITY OF THE TEACHER.

How many teachers in a hundred can meet these requisitions? How many are there who fall below and yet might greatly improve, and from having indifferent success might triumph, and become not only highly esteemed, but popular and happy, as well as successful in a pecuniary sense? We hold that the thinker, the brain-laborer, and especially the teacher, who instructs others in all that pertains to literature and science, is as really a producer as he who uses the knowledge acquired from the teacher in the accomplishment of business purposes. Does not the teacher who instructs the pupils how to keep accounts, and thus qualifies them for commerce, banking, and other business, contribute quite as essentially to the acquisition of property as he does who keeps the accounts, plans business, and works out the results? True, the grindstone does not cut down trees, or hew timber, mow grass, or plane boards; but the axe, scythe, and plane are useless without the sharp edge which the grindstone imparts. So the human mind sent out without the sharpening influences of education, and the refining elements of moral power, can not with facility cut its way to honorable and worthy success.

The teacher may properly feel that he is one of the main factors of the world's success, and while doing his duty faithfully and nobly, though he may not be appreciated or properly rewarded, let him stand erect as one of God's noblemen. Let others construct fabrics and erect piles of architecture which must crumble by time and

waste by the using; the teacher is working for that which is more precious than marble, and more enduring than columns, arches, and domes.

PHRENOLOGY THE TEACHER'S BEST AID.

Since mental and physical development, and the proper training of the young are subjects of the first importance, anything which will aid teachers in imparting knowledge, with wise regard to the natural constitution and talents of pupils, and which will assist pupils in acquiring it, challenges attention, and demands adoption. School-books are assistants to teachers and pupils, but they are not all perfect, and in the nature of the case can not cover fully the ground of illustration, and much must therefore depend on the teacher, as to how rapidly education shall proceed, and how thoroughly the pupil shall understand the topics taught. Perhaps the crudest of all subjects, the least understood by the masses, is that of mental philosophy; mind being regarded as an abstraction, as a mystery; and the usual mental philosophy, which aims to elucidate mental processes, is not easily understood, and altogether too general in its terms for clear appreciation or practical use. We doubt if any president, or professor in our colleges, who, following metaphysical science solely as his guide, has the remotest idea, when a class of students are first presented to him, which of them will succeed best in history, which will excel in mathematics, which in grammar and languages, and which in philosophy. Consequently such instructors as he are obliged to wait for the manifestation of talent as much as they are obliged to wait for the manifestation of character in each of their pupils before any opinion can be formed. Who will be pliable and conformatory in regard to rules and discipline, who will be restive under restraint, mischievous, idle, careless, or wicked, they can not predicate. In other

words, the old mental philosophy does not pretend to criticise men at all, nor to understand who is prone to the good or to the bad, to the theoretical, or to the practical. The system of reading mind, called Phrenology, on the contrary, proposes to aid teachers and parents with respect to all these interesting points, and to classify pupils according to their natural adaptations.

TEMPERAMENT,

AND ITS RELATION TO HEALTH AND CULTURE.

Temperament is a word in very common use, but the meaning attached to the term by different people of intelligence is vague and varied. We meet with many who regard it as a condition of disposition, a peculiar state of the emotions. With such people, a man of harsh and rough disposition has an *excitable* temperament. One who is meditative and cautious, has an *equable* temperament. One who is hopeful and careless, has a *sanguine* temperament. One who is lacking in courage, firmness, and force, has a *dull* temperament. One who is active, caretaking, solicitous, and spirited, has a *nervous* temperament. These popular misapprehensions, as to what temperament really is, in an anatomical and physiological sense, ought to be corrected, and must be, before any well-based and useful information on that subject can be made available to parents and teachers.

TEMPERAMENTAL DIFFERENCES.

Scarcely two persons can be found, not even twins, who are so nearly alike in body and mind that they can not be easily distinguished, the one from the other. The word temperament is here used to express the original organic constitution, with its qualities and functions. Temperament may be defined as "a particular state of the constitution, depending upon the relative proportion of its dif

ferent masses, and the relative energy of its different functions." But temperament has generally been looked at by physicians and others who profess to be well-informed from a physiological and pathological point of view, as a result of conditions of health, rather than from that of anatomy, embracing form, color, and constitution; though health, strength, endurance, liabilities to different forms of disease very largely depend on unbalanced conditions of temperament.

POPULAR ERRORS ON THE SUBJECT.

The former names of the temperaments, *sanguine*, *bilious*, *nervous*, and *lymphatic*, have tended to promote the erroneous ideas of people respecting their meaning, even among those who understood that temperament related to the bodily conditions, and not solely to the mental states. Sometimes when a man was told by a phrenologist or physician that he had a sanguine temperament, he would object, and say that, on the contrary, he was gloomy, meditative, irresolute, and by no means sanguine in disposition. He misunderstood the meaning of the word as applied to him. Another person, when he was said to have a bilious temperament, would warmly deny the truth of the statement, and say that he had not had a bilious attack for years. Another one, described as having the nervous temperament, would demur, and assert the steadiness of his nerves to thread a needle, decapitate a chicken, or stand by and assist the surgeon in an important and painful operation. The lymphatic temperament was looked upon as the mother of laziness and stupidity, and no one was willing to have that temperament attributed to him.

To avoid these unfortunate and continued misapprehensions, it was thought desirable to employ names for the temperaments which would express their real physiolog

ical significance, in a manner at once true to nature, and liable to no such perversion of their meaning.

NEW AND CORRECT NAMES.

There are in the human body three grand classes of organs, each having its special function in the general anatomy and physiology of the system.

First, the Motive, or mechanical system, including the bones and muscles.

Second, the Vital, or nutritive apparatus, including the entire digestive system, and also the heart and lungs; embracing the organs formerly attributed to both the sanguine and the lymphatic; these combined, manufacture vitality, support the power, and repair the waste of the body.

Third, the Mental, or nervous system, including the brain. On this natural basis rests the doctrine of the temperaments, of which there are three, primarily, corresponding with the three classes of organs just named.

We shall speak of them under the head of the *Motive*, *Vital*, and *Mental* temperaments.

I. MOTIVE TEMPERAMENT.

The Motive Temperament is marked by a superior development of the muscular system, forming the locomotive apparatus, and gives a strong desire for earnest, energetic, and enduring action. In this temperament the bones are comparatively large and inclined to be long, and the general form of the person indicates angularity. The muscles are full, dense, and firm, possessing a great deal of strength. The figure is inclined to be tall, the face long, the cheek bones high, the front teeth large, the neck rather long, the shoulders broad, the complexion (generally, but not always) dark, and the hair strong and abundant. The whole system is characterized by strength and

toughness, but not by great sprightliness, and is capable of much endurance.



Fig. 4—R. B. W.—MOTIVE TEMPERAMENT.

These persons are generally masters among men, leaders in enterprises which require manly strength, determination, pride, courage, and thoroughness. As thinkers they are cool, strong, and stern. As speakers their words are measured, and uttered with dignity, deliberate emphasis, and often with terrible effect.

II. VITAL TEMPERAMENT.

The Vital Temperament, in which the digestive, circulatory, and breathing systems predominate, gives to persons depth of the chest, plumpness of the abdomen,

roundness, fullness, and smoothness of face; not very large features, though often thick lips. They are plump in limb, and are full of warm blood, and mental zeal and ardor, and like to acquire knowledge by observation and experience rather than by close, hard study. Such men



FIG. 5—REV. J. B.—VITAL TEMPERAMENT.

are not generally very fond of hard work. They are full of business, driving about, but the team generally does the harder part of the work; they will be masters of steamers, and mills, and machinery, and occasionally we find one bending over an anvil and hammering out his living, but this is the result of circumstances rather than of choice. He may attend a trip-hammer, a saw-mill, or grist-mill—he may generally be found in a business where somebody else does the drudgery. Such people like to

live well; they enjoy physical existence in all its phases —are cheerful, mirthful, good story-tellers, fond of laughing and frolicking, and as children they are fond of mischief and fun.

As scholars these persons succeed well if they inherit a full, plump forehead, and are fortunate enough to have a teacher who understands their qualities of mind and body, and does not insist on quietness as the prince of virtues. As public speakers they generally employ a colloquial style, are not closely confined to notes, and are often eloquent and impassioned in style, especially as lawyers, lecturers, and on "the stump."

III.—MENTAL TEMPERAMENT.

The Mental Temperament depends upon the predominance of the brain and nervous system; it is characterized by a frame rather slight, a head large as compared with the size of the body, and especially as compared with the face. In this temperament we see the high, pale forehead, broadest at the top, delicacy of features, and expressive countenance; fine hair, thin, sensitive skin, and a high-keyed, sharp, but very flexible voice; the figure is often elegant and graceful, but seldom strong or commanding. Such persons are generally sensitive, refined in spirit, have taste and love for the beautiful vividness of impression and feeling, and their inclination is toward study, thought, and mental manifestation. The thoughts are quick, the senses acute, the imagination lively, and the moral dispositions are strongly marked.

TEMPERAMENT SHADES CHARACTER.

Now, it will not require argument to prove that children organized according to these temperaments will be marked by decided differences in tone, temper, and tendency.

One of these strongly marked with Motive Temperament will be comparatively slow, deliberate in thought, but strong in conclusion; will require coniderable incite-

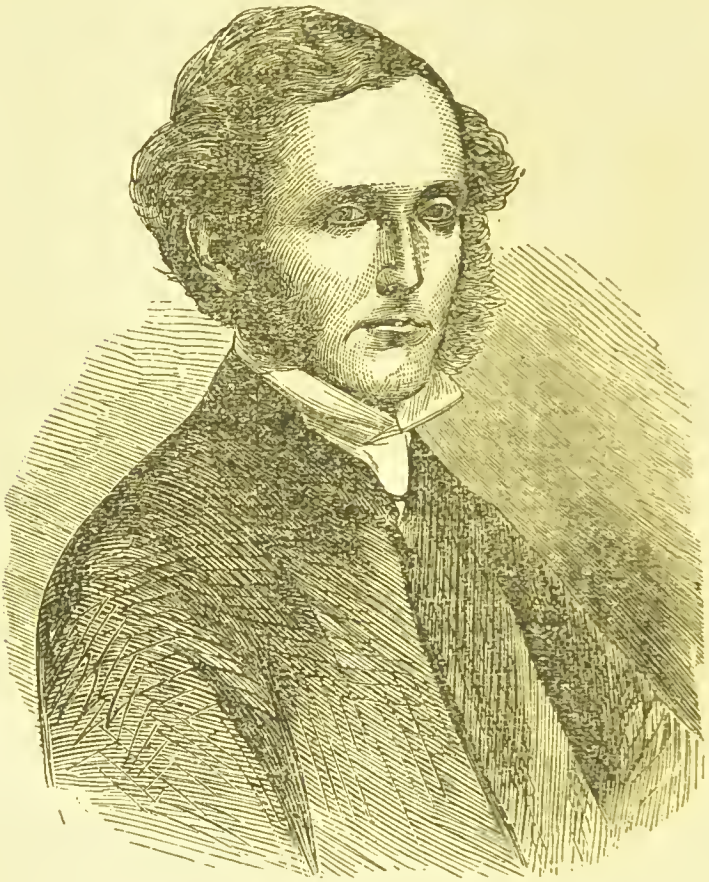


Fig. 6—BISHOP J. T. LEWIS—MENTAL TEMPERAMENT.

ment to awaken his ambition. He does not warm up quickly, and is not inclined to be quiet and steady, prefers athletic sports and work rather than study; but if by study he wakes up something of the Mental Temperament, gets the brain into more active condition, he becomes a

very strong scholar, and we have noticed that these persons are rarely brilliant when young. They are like winter apples, a long time in ripening; but when they do ripen, and induce something of the Mental Temperament upon their strong, muscular organization, they are the ones who bring up the rear—who live longer than graduation day, and, after ten or fifteen years' service in a professional field, begin to astonish the world by their power. Pupils of this temperament require varied, repeated explanations, kindly assistance on the part of the teacher; and if a class could be made up of boys and girls of this temperament, and they should be compared one with another in their attainments, there would be less annoyance to the teacher, and less discouragement on the part of the pupils.

THE STRONG AND SLOW.

We have seen a heavy, dark-brown or iron-gray horse that disliked to trot, but he would pull a heavy load if he could take his time for it. If he were harnessed with a "dexter"-ous horse, we have no doubt one would be annoyed with the slowness of the other, while the slow one might be vexed to think that the speedy animal was in such needless hurry. Two pupils having this difference in disposition and temperament, placed in a class together, will either annoy each other, or the one will outstrip and discourage the other. Remember that this strong, dark, enduring organization, if it can be made to work in the field of culture, will ultimately make a grand mark. But it might, perhaps, be suggested that a good business education for such a boy would be the best; let him become an engineer, a navigator, a miner, a builder, a manufacturer of heavy and substantial articles, and he would, probably, be successful. But as pupils in school, the proper thought is to push each one as far as he may go, and to do it in such a way as to be in harmony with his

natural constitution, and the talents with which he may be endowed. He should not be snubbed and sent to some rough work because he is not so apt at learning as are the more brilliant of his class. It need not be said that one of the most disastrous things that can occur to a boy or a girl is to be so distanced by class-mates as to seem left out in the cold; and so it happens that these physically strong and enduring persons are apt to get behind the other students; and, as a consequence, ball-playing, boat-racing, wrestling, and other muscular games are cultivated by them sometimes to the exclusion of school studies. If we had a class of these pupils — say half a dozen, all that there might be in a school—we would let them work together and compare with each other. They would be as ambitious as those of a different temperament, and, going on hand in hand in the path of progress, they would be comparatively satisfied with themselves; but when comparing themselves with the more brilliant—such as have a genius at study—they would be disheartened and discouraged, and perhaps quit the school, when by proper guidance they might in due time be made excellent scholars, and take an eminent rank among the thinkers of the future.



Fig. 7—BOY—MOTIVE TEMPERAMENT.

THE "RESTLESS LITTLE WITCHES."

The Vital Temperament, in which the blood-making system is strong, has many a good scholar in its ranks; but when this temperament predominates so as to become a characteristic, the mind is apt to be superficial, and the

person, if fond of physical sports, will incline to restlessness, noise, fun, and amusement.

These fair, ruddy, plump-cheeked, blue-eyed, curly-headed boys will be bending pins for others to sit on, or making paper-balls to throw across the school-room, or be making up faces for others to laugh at, and will keep ten feet of bench occupied alternately so that it shall never get cold, nor the dust be permitted to remain on it. They are what some teachers out of school call "wriggling, restless little witches," whose minds can not be kept on their books five minutes at a time. Yet these pupils will learn if they can be rightly trained. We would classify these together, if possible, and once in twenty minutes have them march around the room; we would let them study standing for five minutes, and then sitting. We would let one of them listen to the lesson of the others and alternate; they should have stories told —they should recite in concert, so that they may have a chance to make a noise. In short, every method should be devised to give them occasion for change. These children have generally a good memory of words; they will learn to recite by heart; they are good spellers, often have a talent for figures, and are very fond of geography, though they would like to study by taking the world for a map.



Fig. 8.
BOY, WITH VITAL TEMPERAMENT.

TEMPERAMENTS MODIFIED.

Frequently the temperaments become modified as age advances, especially if the person be studious. It will

generally be found in colleges that persons of the Vital temperament are the jolly, companionable, "hale fellows well met;" fond of frolic and fun, liking fast horses, amusing and roystering games, and they generally have something in pocket to eat, and frequently smoke. Having good vitality, they can stand almost any kind of dissipation for awhile, and they are more likely than any other kind of person to "go to the dogs," through their friendly sociability, and that spirit of companionship which draws others around them.

PRECOCIOUS STUDENTS.

Those having the third, or Mental Temperament, which is produced by a predominance of the brain and nervous system, and characterized by fineness of structure, are natural students, and seek the sphere of mental activity. A little boy or girl with bell-shaped head, thin lips, and chiselled features, with eager, hungry eyes, peers into the book and looks far up the vista of mental culture. They are not of the uneasy, restless, Vital Temperament sort. If possible, such studious girls and boys will work together apart from the cool, stern, Motive Temperaments, and separately from the jolly, rollicking, Vital Temperaments. They want to be where they can pore over their books and make rapid progress. These are the ones who are apt to overdo; they are generally the pets



Fig. 9—BOY—MENTAL TEMPERAMENT

of the school, are made the lay figures for examination days, and are put forward as ranking high, having been advanced rapidly from class to class. If all of this temperament were classified together they would make very rapid progress, but the difference between them would not be such as is seen between those of the other two temperaments and themselves. These persons are likely to become precocious; they get pale in the face, are often troubled with headache, nervous excitability, and become listless as to exercise; and if they live to attain to the age of manhood, they very probably will have injured their constitution and health by early study and confinement, and the want of exercise. These are the ones who have to be urged to gymnastics or calisthenics; they do not want to row, nor play ball, nor run; and those who are accustomed to these games, and are successful in them, do not care to have them. We have seen a row of such boys stand under the shelter of the school-room shivering, while boys of the Vital and Motive temperaments would be scuffling and making snow-houses, and coasting, skating, or snow-balling. They may become the thinkers of the world, but they are not so strong and healthy and vigorous as they might be, if in school they could be classified, placed together where they could work in harmony, and were not allowed to be pushed forward as far as they might incline to go.

READING TEMPERAMENT AT A GLANCE.

A person familiar with the temperaments will look over a school, and instantly see how the pupils might be classified. But these temperaments are not always simple; they are frequently combined in a single individual in varied degrees and proportions, but a sagacious teacher will very soon understand by the build, figure, complexion, and appearance of pupils, to which class they belong.

Where the Mental and the Vital are combined—where there is body enough to support the large and active brain —there the best results of scholarship may be expected. If such pupils are pushed they are able to bear it, though pushing is probably a poor policy for those who are willing to take wing at the least suggestion.

Thus far we have described the extremes of temperament, but these are not very often found to exist in a pure state; they are more or less mixed. One person has a predominance of the Motive, with an average or moderate degree of the Vital and Mental. There should be a class of these selected to work together. Another person has an equal predominance of the Vital, with a moderate share of the other two. Another leads off strongly with the Mental, with moderate sustaining power from the other two. And these may properly be selected and classed with the best of consequences to pupils, teachers, parents, and the public. No wise man will harness two horses together expecting to get the best service of such a team, if one can travel six miles as easily as the other can travel four. But they are tried, tested, and changed until all the qualites of strength, endurance, and speed are found to be equal, then they work in harmony and wear out together.

HARMONY OF TEMPERAMENT.

When these temperaments are harmoniously and well combined, the best results may be expected; not the greatest brilliancy, but sufficient; not the greatest and most rapid progress, but that which is sure. In Frederick the Great there is a combination of the three temperaments. We see the plumpness of the Vital, the strength of the Motive, and the delicacy of the Mental, and each is modified by the other two. He had a large and well-organized brain, which, being sustained by so fine a tem-

perament, made him great, and the world recognized it and expressed its opinion of the man in the title it gave him.



FIG. 10—HARMONY OF TEMPERAMENT. FREDERICK "THE GREAT."

Permit us to refer again to horses, since most people understand illustrations drawn from that source much better than they do those from the human race. Some years since a Broadway stage being full, the author climbed up and rode with the driver. One of the horses was very smooth, trim, and well proportioned, and trotted with a gay and happy gait. We ventured the remark that this horse could not have been long at work on the line, because he seemed light as a fox and perfectly sound, besides looking and moving as if he were young. The driver replied, "Sir, you are much mistaken. That horse has been running on this line for thirteen years. He has killed with work five mates, and the one he now has is, as you see, pretty well used up; yet he is sound as a dollar, tough as a knot, and gay as a bird."

The truth of the matter is, this horse was so organized in perfect harmony of temperament, and in all parts and organs of the body, that there was no weak point, and no strong part to prey upon and wear out weaker ones. Men whose temperaments are so balanced that all parts perfectly harmonize in action, manifest the physical qualities which work easily and enduringly, and give us our octogenarians and centenarians; and if the mental organs can also co-exist in equal perfection and harmony, those characters are produced that adorn human nature, and elicit the admiration and homage of mankind.

We are certain that all schools could be classified more or less according to natural temperaments and mental

tendency. At least teachers who understand these temperaments will know how to treat each one, if he does not classify them in all respects according to their natural characteristics. The slow, strong character will be treated with deliberation, suggestions will be given with time to think them up, while the jolly, plump, rosy, Vital Temperament will be kept as much as possible on the move in whatever is right and profitable. Sitting still to him is imprisonment, while the Mental Temperament would sit too much, would take too little exercise, and pore over books to the detriment of health and ultimate success. Quality of constitution quite as much as size of brain determine the power of thought and disposition, and the facility with which the person acquires knowledge and secures success in business or professional effort.

LAWS OF HEALTH APPLIED TO EDUCATION.

The temperament or physical constitution having been duly considered, it may now be proper to remark that the teacher is not concerned merely in the imparting of knowledge to his pupils. A calm, healthy, well-balanced state of the body and of the mind of the pupils as well as of himself is of the first importance, and this can be attained only through the right use of the physical organization. Hence the teacher should aim to institute in the school-room every means within his reach to minister to the health of his pupils as well as his own; and if he will instruct them in regard to hygiene, especially as to personal cleanliness, pure air, right modes of living, the avoidance of bad habits, such as using tobacco, eating candy, cloves, cinnamon, and peanuts between meals, gum-chewing, etc., he can render them a service which may save them from becoming victims to depraved appetites, and thereby he may sow the seeds of reform and

morals in many a future family. Some will never hear of or obtain it anywhere else.

In the early training and management of children the parents should see to it that care, guided by knowledge, shall be devoted to the proper culture of the physical constitutions of their children, and the comforts and appliances by which a healthy condition of the body and brain may be secured and sustained. This work should not be left for the teacher; yet some parents will neglect it, and the teacher should supply the deficiency where it exists, and also aid parents who have wisely begun the work.

FOOD FOR CHILDREN.

A simple yet plain diet is indispensable. In England children are fed on plain food, and are not permitted to eat at the table with adults and to partake of the same articles of food. Milk, fruit, and wheat, ground without sifting, with oatmeal as a change, would probably be the best food for children before they are old enough to attend school. If they can be made to grow in harmony and health, and their temperaments be normally sustained, they will be ready for the teacher when old enough to attend school, and will not come to him wearied, warped, and out of order, nervous, and fidgety, and fickle.

BAD AIR RUINOUS.

Perhaps teachers are not to blame that school-rooms are ill-ventilated, and hundreds of children are crowded into comparatively small apartments which are overheated; and if they understood the subject, and would do their best to insure ventilation with the means at hand, and exert such influence on school commissioners as they could, the needed reform might soon be hoped for. As long as teachers seem satisfied, school boards, and the

parents, their constituents, are not likely to take trouble and incur expense in the matter. A plenty of books and hard study are supposed to cover all the claims as to education, while the maxim "a sound mind in a sound body" is ignored. If by means of bad air a pupil breaks down, the result is charged to hard study and a noble ambition to rise in scholarship.

RECONSTRUCTION NECESSARY.

We have lectured in many academic school-rooms which were filled with pupils during the day, and when adults came to be packed in as closely as they could be seated for the evening lecture the air was thoroughly stifling, and we have been obliged to employ carpenters to alter and adjust the windows so that they could be pulled down from the top, thus permitting the foul and overheated air to escape; the only method of ventilation, previously, having been to raise the windows from the bottom, which would let in a rush of cold air directly upon the backs of the pupils, which of course could not be long endured, consequently they had no proper ventilation. In large towns, in these days, school-rooms are better ventilated, and at least windows are generally arranged to pull down from the top. Pupils kept for hours in such apartments thus ill-ventilated soon begin to suffer. Their brains become overcharged with venous or unoxygenized blood, their minds become stupid, their nervous systems suffer from irritation, and they can neither think to acquire lessons, remember them when acquired, nor comprehend their meaning. Parents know how difficult it is to keep children quiet at home or in church, and how natural it is for them to be active; yet they expect them to be kept still at school and behave themselves, as it is termed, when stillness, except they become stupified by the foul air, is next to impossible. An effort should be made,

therefore, to provide children such school-rooms as will secure for them fresh air, which is about the cheapest thing in the world, and which more than half the people seem studious to avoid.

HOME-STUDY OFTEN PERILOUS.

Not only are children thus overtaxed with study under unfavorable conditions in school, but they are expected to take their books home, and many of them have to study till bed-time. When they return to school they are confined as before. This, added to the weariness of the previous home-study soon completes the work of deranging their health, both of mind and body. Then the noon-day lunch is frequently composed of cake or superfine bread and butter, or both, and pupils would perhaps scarcely fare better if they went home for their meal; and the result is they soon develop dyspeptical tendencies, irritability, nervous exhaustion, heat of brain, and confusion of mind. It is not to be wondered at that children crave holidays and a vacation. It is natural for them to run, leap, struggle, and exercise in a thousand ways, in the open air, under the blessed sunshine. School-rooms should therefore be constructed in such a way as to be light, airy, and roomy, with ventilation that shall change the air as often as need be, and sufficiently warmed for health and comfort in cold weather, in such a manner as not to burn out the vitality of the air, or over-heat the rooms.

SLAUGHTER OF THE INNOCENTS.

Pupils thus trained in school, surrounded by detrimental conditions and pushed in their lessons, especially if they be of the mental temperament, and therefore comparatively slender in constitution—and these are the ones that are most likely to be pushed, and to over-exert themselves—take a leading rank for a time in their studies

are very likely to go into a rapid decline of health and to early death. Teachers and parents have thus combined to drive the growing children to self-destruction, through their over-mental exercises, and the usual lack of healthful, bodily action. The brilliant pupils cut down in the morning of life, with such eminent promise of future usefulness and distinction, of course are deeply mourned by all. The sorrowing friends are told at the funeral that "death loves a shining mark," that "the Lord gave, and the Lord hath taken away." True, "the Lord gave and the Lord hath taken away" the brilliant loved one, the pet of the household, not for inscrutable moral purposes, to wean parents from earthly treasures, and lead them to religious humility and supreme trust in the spiritual and immortal, but, as an inevitable penalty for violated law. Of course it was a sin of ignorance on the part of parents and teachers, and to this only is chargeable the early death of the precocious child. It has been "taken away" not vindictively, but as a natural penalty for the infraction of physiological law; a law as easily understood as a thousand other matters which teachers and parents learn and apply to the instruction, and employ for the guidance, of those under their charge. They are instructed in music, dancing, and drawing, in many games and accomplishments, at great expense of time, money, and patience, and the same amount of study and effort would make them wise in the laws of health and life. Children less than five years old may be taught to refrain, cheerfully, from all wrong articles of food and drink, and to retire without complaint at an early hour, thus promoting health of body and brain.



Fig. 11—PRECOCIOUS.

BOYHOOD AND MISCHIEF.

The burly, mischievous urchin who is too restless to study, and too full of fun and mischief to keep still, may retain his health passably well under the modes of management we complain of, for he can hardly be made to over-study, and though he is the mischief-breeder of the neighborhood, and a pest to everybody except to his forgiving mother, is not thus taken away by the Lord; and though he may violate all the canons of courtesy and good behavior in the neighborhood, he at least obeys one law, namely, that of exercise and abundant breathing, and refrains from over-study; although he could be trained in such a way as to behave himself in the neighborhood, and to study in the school, and become an exemplary member of society, if he had a method of study and discipline in accordance with his constitution; but the precocious child with great brain and mental temperament, placed in the same school with this ruddy rogue, will study faithfully and break down, while the cheery, jolly boy will do as little as he can in school, and if he gets thrashed for his sportive recreations and deficient lessons, it is for him only another method of exercise; at all events, he does not break down in health.



Fig. 12—MISCHIEF EMBODIED

When precocious children under hot-house training are called to untimely graves, the old heathen proverb comes in, "Whom the gods love, die young," and that may be a consolation to the mourners; but they should learn that God's laws which relate to physical health are just as firmly established in the order of the universe as the moral laws, and while we obey the one, we ought not to leave

the other unobeyed; therefore it is little less than blasphemy to say that the Lord smites these little, slender children, whom we virtually destroy by our wrong treatment.

CLOTHING OF CHILDREN.

In connection with bad air, little exercise, or that which is irregular and sometimes excessive, and the hot-bed method of mental training and excitement by books and society, children are generally very imperfectly clothed. The fashion of dressing boys with short pants, stopping above the knee, with stockings often thin and tight-fitting, with tightly-laced boots, which constrict the ankle and impede the free circulation of the blood to the extremities; and also the dressing of little girls with skirts hardly reaching to the knee, with thin drawers and stockings as the only means of protecting their limbs, is to be sincerely regretted and severely condemned. The fashionable boy will of course have a thick overcoat, muffler, perhaps a fur cap with ear-pieces; and the girl will have a massive cloak, though short, a fur-tippet and muff, but the poor limbs are not a fifth part warmly enough clad.

A man, the robust father of children thus dressed, will have thick, knit drawers; stout cloth trousers; thick, warm stockings; and boot-legs to cover the limb nearly to the knee, where the overcoat meets them; and even then he feels cold, and desires Arctic over-shoes, and a lap-robe in cold weather to wrap around his feet and legs. Men know what they want, and if able, they will have it; but the poor children with large and over-heated brains are so very wrongly clad, that the blood refuses to visit the feet and lower extremities, and, of course, it rushes to the brain, lungs, and liver, and produces unhealthful congestions, tending to croup, diphtheria, pneumonia brain fever, and consequently untimely death.

WHERE FASHIONS COME FROM.

Inventors of fashions and venders of patterns live in Paris where grass remains green all winter, and though their styles of children's clothing would not be desirable even there, they are simply absurd and murderous in New York, and in all the regions North, where snow often falls to the depth of from two to four feet, and the thermometer sometimes ranges from zero to twenty degrees below. Occasionally we see a matron who dresses her children as properly as the short-dress method will allow. Her children are supplied with warm drawers to the ankle, thick woolen stockings, stout shoes which do not pinch the feet, and heavy leggings when they go out; and the fresh, healthy complexion, plump faces and hands, and their ample growth and good proportions are eloquent in praise of that mother's wisdom. Her children come to noble maturity, and "rise up and call her blessed," at least by their looks, strength, vigor, happiness, and long life.

In regard to tight-lacing, people know enough, and some will insist on ruining their health and constitution by practicing it; and most people will wear shoes quite too small, and thereby ruin their feet, and make their life miserable from bunions and corns, and no matter how truthfully and earnestly we may inveigh against these habits, not a few will apply the title of fanatic, if nothing worse, and not thank us for our effort to save them. Old men and women, with sad experience, will know we are in the right, and will wonder why we do not "cry aloud and spare not." The young probably will think as their parents used to, that their clothes are "not tight at all," and their shoes are "quite large enough." Time and pressure, however, will make limping and short-breathing invalids mourn over their folly after the evil has been done beyond recall.

SUNLIGHT THE LIFE OF THE WORLD.

In some families there seems to be an utter dread of light, a kind of photophobia; as, in some others, there seems to be hydrophobia, or a dread of water. There are some excellent people who aim to do their duty to themselves and their children; cleanliness is practiced; proper regard for clothing and pure air is perhaps observed, yet there is a continual effort to keep the house dark, to surround it with shade trees, and on going out, to use parasols and veils, and walk on the shady side; or stay in till the sun is far in the West; and some, indeed, have such a mania for a delicate complexion, that they almost wholly deny themselves of the health-giving influence of sunshine, or even of its reflected light. They live in the shade and become faded, fair, and tender. It may be asserted confidently that for lack of the vivifying influence of light, many thousands of children die yearly, and other thousands drag out a weary and weak existence to a premature death.

NATURE GIVES US ARGUMENTS.

Let us take lessons of Nature in this respect. Even forest-trees that grow in the open air, if they are permitted to stand in thickets, creating their own shade, and a shade for each other, become thin, lank, tall, and weak, and the timber is very coarse and loose, as compared with that which grows in the open field, where the sun can bathe every side of it during the long summer days. The white oak that grows in the open pasture, is tough and gnarled, and has twice the strength of the same kind of timber that grows in the thicket; and this open-land timber is the kind which is chosen for important parts of ships—constructed to struggle with the storms of the ocean. Of course, the tree that grows in the open field is exercised, and thus strengthened by the winds, and thereby

benefited more than is one in the denser forests or groves. Grass that tries to grow in the shadow of houses or trees —how sickly, and limp, and colorless it is! Sometimes, in warm, dark cellars potatoes make an effort to grow, and the thin, white, tender vine will creep for yards towards a little chink in the wall where the light comes in. Lifting itself, it puts its head out through the crevice, and the instant it gets into the open light the stalk becomes green, six times thicker than it was on the inside, and tough, woody, and healthy. Everybody knows that celery is white, tender, and delicious, and many people know that it is planted in the bottom of a deep trench, dug in the garden for that purpose; and as fast as the plant lifts itself above ground, the earth is banked up around it, and it is thus literally compelled to grow under ground, all except the top leaves. If the plant could grow as potato vines and other things do, in the blessed sunlight, it would be tough and strong, and, of course, unfit to be used as a tender, succulent vegetable.

DIRTY CHILDREN—WHY HEALTHY.

We sometimes hear people speak sadly of their tender children who are pale and sickly, as having been unfortunately kept in the shade; and in a fit of reform they say the children must go out and play in the dirt, as if dirt were wholesome; and we have known families to have a pile of loam brought and deposited under the thick shade of trees, where their delicate children could go out and play in it.

The children that run wild on the streets and fields, and dig in the dirt, get their health from the active exercise, from the sunshine and out-door life, not from the smut of their faces, the soil they may wallow in, or the dirt of their clothing. Such children are more robust and healthy than those of the rich who are screened from

the roughness and rudeness of their mode of living, and if they carry health and power into future success in life, often far surpassing those more carefully reared, it is the sunshine and the open air, and the free exercise, not the filth, nor the earth, nor the dirt, that does the work.

We would recommend to all people, and especially to those whose children are sensitive and delicate, that they occupy the sunny side of the house, and live in those apartments where the sun comes in all winter and all summer. Of course, in the hottest weather, it is not appropriate to sit in the glare of a noon-day sun, but every child should be raised where there is light enough to make a rose-bush or a geranium plant flourish; and the curtains and blinds that are employed to keep the carpets from fading, should be thrown open sufficiently to keep the mother and the children in a healthy condition.

Academies, colleges, and school-rooms should be adjusted on the plan of admitting an abundance of light. They need it as much as a printing office or factory needs light. The abundance of light in many of the manufacturing establishments is of great assistance in the maintenance of the health of the operatives, who are so much confined within doors. Sunlight and air are cheap and abundant. It is an excellent plan to dress children in white garments in summer, because the light will then go through them, and tan and toughen the body, and thereby impart to the wearer a degree of health and vigor which is impossible to those wearing black or dark garments that prevent the light from reaching the person.

RUDE, BUT SENSIBLE.

We heard an eccentric old gentleman say, many years ago, that when he built his large mansion, his wife and children said they must have windows here and there, all over the house, several in one room, but as soon as he

had planned and put in all the windows, then they must have blinds put on to shut out the light. He good-naturedly put the blinds on, and when they moved into the house, they thought they must have curtains to keep out the rest of the light; and he said that the making of the windows was one expense, the blinds just as great an expense, and the curtains another expense; "And now," he said, "my house is so dark that I grope to find my way." And he added, that if he were to build another house, he would have only just so many windows as he needed for the light he was expecting to use.

We believe it better that carpets and furniture should be faded, than that women and children should be made tender and delicate from a lack of air and light.

COLLEGE TEMPTATIONS.

Those children who are able to endure the prevalent course of treatment and training, having constitution enough to resist these impediments to health, may, perchance, enter upon a collegiate course, and there they find a new series of difficulties and temptations. They soon form new acquaintances; they are thrown into the society of spirited, ambitious, and perhaps reckless young men, and being anxious to stand equal with their associates, and unwilling to be outdone by them, they seek to enter upon whatever usages are common among their college mates. Those who have not learned to smoke and drink, meet an early invitation in that direction. If they have not before acquired the habit, their nervous systems revolt at the first compliance with such abuse, and disliking to be called effeminate, weak, and unmanly, they strive to overcome their natural repugnance to tobacco, and in a few months are able to smoke with the bravest Freshman. Among college students to-day, we believe that two-thirds of them smoke, and many of them drink, and not a few of

them go home from college, perhaps before graduation, broken down from what is kindly called "hard study;" but in point of fact, from dissipation in many forms, and not from over-study. We believe tobacco is one of the greatest impediments to education; yet unhealthful methods of living, in connection with college and academic study, present another difficulty. If the Professors in our colleges, and the Principals in our academies, would study enough of physiology to understand what kinds of food are best adapted to their students, and see to it that they have the opportunity to obtain such food; and also deliver lectures, so that students, and those who keep boarders as well, might learn what kinds of food are the best calculated to maintain health, students could thus become imbued with the idea that it is their duty to themselves, and to their future happiness and success, to eat and drink rightly, as well as to avoid alcoholic stimulants and tobacco, and thus the standard of education might be elevated fifty per cent.

We claim that no student can sustain his constitution in the best of health, and make progress in learning and graduate from college with a sound constitution by following the habits, gustatory and social, that pertain to college life generally.

WHAT AND HOW STUDENTS EAT.

Many students at colleges and academies eat for their breakfast, toast made of superfine flour bread, or griddle-cakes made of the same material, with syrup and butter, drinking coffee made very sweet to be tolerated while eating the sweetened cakes. At noon there is, perhaps, a dinner of fat meat, or roast beef and rich gravy, with superfine bread and butter; at night warm biscuit and butter, and perhaps syrup with it; besides, candies are consumed by students at a fearful rate, and some of these

are doubtless drugged, in such a way as to excite a yearning desire in the nervous system to continue eating them. Now, this great amount of superfine flour, butter, sugar, syrup, and the like, produces heat and excitement in the system, but does not feed the brain or strengthen the muscular system; it covers the face with pimples in those of a light complexion, and gives a brown, bilious, yellow look to those of a dark complexion. Such a mode of living tends to produce bilious complaints, dyspepsia, and kidney difficulty, and injures the strength of mind, clearness of thought, integrity of memory, and vigor of body. But if children at home are fed in this manner, they get their appetite fixed in that direction, and clamor for it at school; and students are generally supposed to be rather difficult to please as boarders; and sometimes starveling academies and colleges, that need every possible dollar of tuition money to keep going, will seek to secure such board for students as they wish to have, whether it be of the right kind or not. Three-quarters of the teachers know much more about grammar, arithmetic, rhetoric, and logic, than they do about physiology, and very many of them have dyspepsia from living on such food as we condemn for students. We have known Presidents and Professors of colleges, while sitting under our professional hands, to open their eyes with astonishment when we told them that wheat ground without sifting is complete food, and ought to be the bread-stuff of workers and thinkers; that they should in the main avoid the fatty part of meat, and eat less butter by nine-tenths, and less sugar by nineteen-twentieths than they have been accustomed to; and that they should avoid spices, because they are irritating to the nervous system, and destructive of health; and, on the contrary, use fruit abundantly, and avoid any other kind of acid, since fruit-acid in its natural

state is organic, while vinegar is the product of decay and poisonous in some degree.

If they do not understand these laws, how shall they be expected to practice them, or to communicate a knowledge of them to their students?

BROKEN DOWN STUDENTS SAVED.

We have had under our hands many a student, broken down from over-study and wrong eating, having been absent from college a year or two, who has been advised by us how to get out of the trouble, and in four months has been recuperated, with ten pounds additional weight, going back to college rejuvenated, to continue his course of study.

We would therefore urge upon teachers, parents, and pupils, a temperate and judicious form of eating. It is not so strange that students over-study in college, or reach results equivalent to it, especially when their habits of diet, to say nothing of stimulants and tobacco, are considered.

POVERTY OFTEN A BLESSING.

Poverty is not a convenience, but it is often a great blessing to students in colleges. Those who have plenty of money, and can luxuriate, as unrestrained youths are sometimes inclined to, fail to become scholars, and generally leave college with ruined constitutions; and it is to the poor that the world is mainly indebted for distinguished statesmen, able clergymen, successful teachers, physicians, engineers, inventors, soldiers, or business men; and in this country, it is not uncommon, when the biography of eminent men is being prepared, for the fact to be recounted with praise and pride, that the subject was obliged to teach school during vacations, and perhaps during the sessions to black the boots of his fellow-students, or saw wood for them to pay his college expenses

Of course, poverty prevents such persons from losing time and money in license and licentiousness in various forms. They work, take ample exercise, and are tired enough at night to sleep abundantly, which properly rests and recuperates the nervous system ; and they are ready for study or work the next day. It is not their poverty that qualifies them to become more successful than other students, but it is their poverty which forbids dissipation, keeps them confined to their duties, and leads them to that labor which keeps the system invigorated, the digestion good, the circulation complete, and the brain, as a consequence, clear and strong.

Of course, parents feel anxious about their precious child, their hope and pride; they have tried to set a good example at home; smoking, drinking, and other modes of vice have been sedulously avoided; yet, while they have kept the outward morals of themselves and their child uncontaminated, they induced in him a feverish state of the brain and nervous system in the common school and preparatory course, and by a diet and regimen not favorable to the best of health; so that he is open to temptation on every hand, the moment he is removed from parental restraint, and he sweeps out into the current of that life which dazzles, captivates, and leads astray.

BUSINESS MEN DO BRAIN-WORK.

Men in business are required to think as much as students do in college, and they maintain their health year after year, if they live temperately and properly. If we had a dozen boys to train, and there were no college at hand, we would, if possible, move the family within hearing of the college-bell, and our boys should eat every meal under the parental roof, and be in bed every night at the proper time. We commend the wisdom of those men who move to the vicinity of the college or academy

where they wish to educate their children. Young, aspiring, restless, excitable persons, unfitted by age, experience, or culture, are ill-adapted to carry themselves wisely, if they are set free from parental guidance and restraint. Those so set free will blame their parents for their laxity when they become old and wise enough to view the matter correctly. If they are kept straight, and are compelled to carry themselves properly, they will ultimately praise their parents for their fidelity and imitate their good example.

CONDITIONS OF SCHOLARLY SUCCESS.

Correct habits of living, ventilation, abundance of exercise, and from seven to ten hours of sleep would carry nine-tenths of intelligent children into, and through college with excellent health and unimpaired constitution. The world is coming to know, not fully, perhaps, in this generation, that students can be thoroughly educated, much better, indeed, than now, and graduated with glowing health and vigorous constitutions.

Thus physiology teaches those who would study it, how to take care of the health, how to maintain the brain in vigor, so that study shall be a pleasure and not a snare. But we would emphasize the fact, that if children in the primary departments could be trained in calisthenics and receive object lessons, and have recitations in concert, and look at lessons put up by means of great placards, so that the whole school could see and read them, and not have a book in hand for the first two years, it would make study to them a pleasure and not a burden. The little ones are anxious for motion; watch them as they sport on the green; they are not still at all; and in school, for a year or two, their time should be devoted to systematic, calisthenic exercises, marchings, singings, reciting in concert, and looking at objects and listening to explanations

There are schools of this sort, and an improved public sentiment in reference to physiological training, will bring the Kindergarten, the calisthenic school, object-teaching and diagram-instruction into more general use, and obviate many of the evils of early training and education now prevalent. Children sometimes get broken down before they are twelve years old. How many little, blue-eyed, stoop-shouldered, narrow-chested, thin-faced girls pore over their books and stand at the head of their class, and then in Sunday-school do the same thing! Is it a wonder that we have so few healthy women, when the best of them are thus pushed in their studies, and encouraged to dress wrongly, to eat wrongly, to study wrongly, and thus violate every physiological law? We would have teachers and parents understand these points, and they all should be trained and enlightened together; otherwise the parent will undermine the work of the teacher, or the teacher will fail to carry out the purposes of the best instructed parents.

The late Horace Mann gave a wonderful impetus to education, and if he could have been listened to thoroughly, the educational systems would have been carried to a very much higher point, and been far more in harmony with physiological law than at present. He induced the construction of the best school rooms the country had seen, and Massachusetts and the country owe to him more to-day, than perhaps to any other man, living or dead; for his work touched the springs of life, and health, and culture. It sought to lay sound and deep foundations for the health of the body and the culture of the mind. He wore himself out in the great work of education.

While Secretary of the Board of Education he wrote twelve Annual Reports, of one of which the *Edinburgh Review* says: "This volume is indeed a noble monument

of a civilized people; and if America were sunk beneath the waves, would remain the fairest picture on record of an Ideal Commonwealth."

INTELLECT, THREE-FOLD.

We have explained under the head of "Temperament the difference between one pupil and another, as to aptitude for study, exercise, physical exertion, and mental labor. We come now to say that there are, speaking generally, three kinds of intellectual tendency. These tendencies come under the head of Perception, Memory, and Reflection. Those who are very full in the lower region of the forehead, whose heads are long from the opening of the ears forward to that region, the temperament being favorable, of course, will be quick to perceive things and their qualities. They will gather knowledge rapidly, will catch educational facts with an avidity illustrated by the manner of chickens when corn is scattered among them. Chickens do not stop like squirrels to nibble, nor like rabbits to masticate, but they seize and swallow the grain. So pupils, the lower part of whose foreheads are very full and prominent, seize upon facts as soon as they are presented, and become instantly masters of them. (See fig. 13.)



Fig. 13—LARGE PERCEPTIVES.

Speaking with a little more particularity, we may say that for every quality of matter there is in the mind a corresponding faculty.

PERCEPTIVE, OR OBSERVING FACULTIES.

Individuality takes cognizance of things as mere existences without reference to shape, bulk, density, color, number, order, time, or place. It appreciates the divisibility of matter. The part of speech in grammar called *noun* relates to this faculty and its work. There are other perceptive faculties which judge of other qualties of matter besides mere existence. These are *Form*, which judges of shape; *Size*, of extension, magnitude, or bulk; *Weight*, of density, or ponderability; *Color*, of hue; *Order*, of arrangement, or method; *Calculation*, of number; *Locality*, of direction or place; *Tune*, of sound, and *Time* of duration. As these relate to the qualities of things mainly, the term adjective is used in reference to their action.



Fig. 14—EVENTUALITY LARGE.

HISTORICAL MEMORY.

Eventuality, located in the center of the forehead, relates to history, motion, facts, and transactions, and here comes in the verb. When we speak the word "horse," the faculty of Individuality instantly has before it the appearance of the animal in question; the horse, in the abstract, is there, and the grammarian recognizes it, or its name, as a noun. But when we say, "It is a large, handsome, dark-bay horse," the faculties of Form, Size, and Color recognize these qualities, and the grammatical term adjective expresses those qualities; and when the horse moves, it is an action, an event, recognized by Eventuality, and then that part of speech called verb is brought into service. The pupil to be a good

grammarian needs, especially, all these faculties which relate to nouns, adjectives, and verbs.

It must be evident to the teacher, when he sees one child deficient in this region, and another which is eminently developed, that they can not properly be classed together, or taught alike. The one with a prominent brow will learn facts and things perhaps ten times faster than the other, and the question is whether the boy who is dull in respect to facts and things shall hinder twenty boys who may be as quick as a flash in reference to these matters. But before we are through we will endeavor to bring to view some compensating thoughts in behalf of dull boys.

REFLECTIVE, OR REASONING FACULTIES.

The *Reflective* or reasoning organs are located in the upper part of the forehead, and those in whom that part is large, or those in whom the head is long from the opening of the ear to the region of the forehead, will show a corresponding tendency to consider the abstract and philosophical side of subjects. If these persons are moderately developed in the lower part of the forehead, they will go from principles to facts. Comprehending principles first, they will appreciate the necessity for facts, and hunt for them. They are like the architect who builds the house first on paper and then goes out and looks for the material with which to erect it, while he who has a large lower forehead gathers facts rapidly, and may desire to know their mean-



Fig. 15—REASONING ORGANS LARGE.

ing and value. Such an one is like him who, in the progress of his business affairs, buys timber, lumber, bricks, and other material, and when he has accumulated all the parts or factors of a house, casts about to see what he shall do with them, and concludes on reflection to build a house. A person with a large upper forehead inclines to thumb his book through, at least to read the chapter-heads, and see in some measure what he has to expect in reading the book. As a student he studies the rules of his text-book, and goes back from the rule to the practice, and thinks out every problem in arithmetic, in grammar, or mathematics. One in whom the perceptives are predominant and the reflectives are deficient, learns the forms of procedure quickly, will be very flippant in his studies if little thinking or reasoning be required, and may work out results, but will not be able to explain why he does this or that, or why the results should be as they are. It often happens, therefore, that those boys who are dull in regard to the preliminary studies, who are slow to gather facts, and whose memory is poor, will be regarded as dull and unpromising. They have to be "coached" by other pupils in arithmetic, and in the preliminary details of various subjects of study; but when they arrive at fifteen or eighteen years of age these square-headed boys who, like winter apples, are becoming ripened, are able to help those early smart ones, who have the retreating forehead, in the higher branches of mathematics and philosophy.

HARMONIOUS DEVELOPMENT.

If a boy have an equal and ample development of the lower part of the forehead, of the middle section, and of the upper; in other words, if he have a long and prominent development of the forehead, and one that is harmonious in form, with a favorable temperament, he will be equal to the best in perception, will gather a knowledge

of facts and things quickly, will treasure up and remember what he has learned, and as he advances where more reasoning power is required he will be competent for that place. Such persons will do very much toward educating themselves; they will require but little instruction; will make rapid progress, attaining steadfast footing at every step; and these are they who become strong, sound, comprehensive, and powerful.



Fig. 16—BALANCE OF INTELLECT.

TRUE INTELLECTUAL CLASSIFICATION.

We suggest to teachers the propriety of classifying pupils in such a way that those with retreating foreheads and prominent brows shall be together; those who are full in the center of the forehead, who gather and retain facts and history shall be together; those with square, heavy foreheads at the top and deficient in the base shall be together; and those who have an equal and large development of all the parts or regions of the forehead shall be allowed to work together; and thus let each class make progress as fast as it may, while the teaching shall be so varied as to be adapted to each class according to the mental peculiarities of its members. In this way teaching would lose half its weariness, and pupils could be pushed forward with less drudgery to themselves, and would make, perhaps, twice as much progress as they now do.

Putting pupils of all kinds of temperaments and developments of mind into one class, and trying to establish some general system of teaching that shall answer for all, is largely a waste of time, patience, and strength on the part of the teacher, and none of the pupils in that way

can be properly taught; but the teacher who will divide his pupils into such classes as can take a given line of explanation and instruction profitably will find his work much easier than it is in the ordinary way, and will achieve a far better reward for his efforts. In one case his instructions will be full of facts, and in that manner he will invite the pupils up toward ideas. In another case he will get hold of the idea, the theme, or philosophy of the subject, which will awaken in the pupils an interest to follow the teacher toward the facts. In a case in which the three qualities of intellectual faculties, viz., *Perception*, *Memory*, and *Reflection*, are equally developed, the teaching may be done in three ways. The principle may be stated and the facts inferred; the history may be given and the principle inferred; or the particulars may be set forth, as in object-teaching, and the pupils will follow the teacher as fast as he can travel toward the conclusion.

Thus, following a course adapted to the peculiar talents of different pupils, and classifying them accordingly, the results of instruction might be made much more equal than they generally are, and the pupils, when they finally left the school, would be much more nearly on a par with each other in regard to scholarship and preparation for life's duties. As it now is, some pupils are but superficially educated, and go into the world knowing but little which will qualify them for their duties. Another set of pupils become theorists, and, knowing but little of practical life, become philosophical and theoretical failures. Another set, the well-balanced and harmonious, in spite of the fact that half the labor of the teacher in their behalf has been wasted or ill-adapted to their needs, nevertheless leave the school fairly furnished for the duties and labors of life, and are they who are most likely to take a useful place in the world and rise to distinction. Yet, if they could have had, during all their school days, a course of

instruction adapted to their own development, and had not been obliged to wait idly for the dull and awkward, they might have had double the amount of culture, and been able to take a place at twenty-one which now they have to work ten long years to reach. Teaching, wisely predicated on temperament and mental organization, would double the amount of education attained during school-life, and promote the power and influence of graduates in an equal degree. As we firmly believe this to be true, we do not over-estimate the importance of our theme.

PERCEPTION—THE WINDOW OF THE MIND.

We have called attention, in general terms, to the training of the intellect, to the different departments of intellectual development, or the different ranges of faculties through which knowledge is brought to the understanding. It will make the subject explicit, if we analyze the intellectual faculties more in detail, and we invite the reader to the consideration of the first intellectual faculty, which acts as a door or window to the mind.

INDIVIDUALITY.

Individuality is the first faculty called into action in intellectual effort. It recognizes the existence of things, the divisibility of matter; it is the faculty which separates one thing from another. A person with but an indifferent development or activity of it may look at a brick wall, within fifty yards of his point of observation, and to him it is one great mass; it is a wall, and that is all that it amounts to. Another, who has Individuality large and active, will see the tiers of bricks, and looking still closer, he will see that these tiers are made up of separate blocks of matter, and after a while, he sees that the wall is made up of fifty thousand individual bricks, laid in tiers in such a manner

as to break joints, and thereby give strength to the structure. To him, therefore, the wall is more than a great single mass of matter; it is made up of individual masses, and he recognizes these individual components of the wall.

This faculty should be cultivated by those in whom it is not naturally strong, in order to make it more active and influential. The young should have their attention directed to things as separate from everything else. Things should be individualized, specialized, regarded in severalty.

NATURAL LANGUAGE OF INDIVIDUALITY.

The natural language of this faculty is, "Let me see!" and those in whom it is well developed, put their heads forward when they look at objects that are miles away, as if they would push the faculty towards the object which interested it. Publishers of illustrated history appeal to this faculty by their pictures and illustrations; hence the pictorial papers are popular, excite interest, and impress the facts and details of a subject most vividly upon the mind of the reader and observer. Though we may hear or read the statement that the cars ran over an embankment thirty feet high, and were piled up in an indiscriminate heap, broken and shattered, we look for the illustrated weeklies for a picture of the scene; and it is sometimes a feast for Mirthfulness and Comparison to observe the difference between the pictures of two of the leading illustrated papers which profess to present the same scene. So thoroughly has the mind of the public been trained to look for a picture of whatever disaster occurs, that the picture of a burning ship at sea, with the passengers leaping overboard and struggling in the waves, or an illustration of an explosion, which, like the burning ship, was not seen at all by the artist, the picture of which he makes up solely from imagination, or from some rough sketch or description, are

eagerly expected and the observing faculties, Individuality as the leader, must see the picture in order to get a vivid sense of the scene.

It is well known that if we see an avalanche, a ship launched, or wrecked on the rocks, a great conflagration, or a railroad catastrophe, it will make an impression upon the mind that will haunt us for weeks. We never can forget its horrors, though we might be glad to do so. Illustrations of travel, mountains, rivers, towns, and all sorts of scenery, make the book which contains them sought for, and when faithfully done, a man seems to have traveled among all nations, witnessed every scene, and would instantly know the places depicted if he could be, while asleep, set down in them.

ILLUSTRATED LITERATURE AND SCIENCE.

The map, in the study of geography, illustrates another use of Individuality, together with several of the other perceptive faculties. Since geographical atlases have become universal, we have to appeal to persons nearly three-quarters of a century old, to recall the delight which was occasioned by the first school atlases. The committing to memory of descriptions of countries, rivers, towns, lakes, etc., in the olden time, though true in fact, brought little knowledge to the mind, and no training of the mind, in fact, but that of verbal memory and imagination. Not only do children's picture books and primers demand illustration in these days, but cyclopedias and quarto-dictionaries must be full of illustrations to be saleable. Fifteen years ago the American Cyclopedia was considered a treasure in literature and science, but there was not an illustration in its sixteen volumes. During this Centennial year the same work is undergoing revision, and to make it comport with the spirit of the times, it is full of beautiful illustrations. Twenty years ago it would answer to describe, in

appropriate language, any object of interest. Now the rattlesnake, for instance, must not only be depicted as a whole, but the poisonous fangs must be exhibited in the dissected head, and the rattle also must be shown, and its structure defined as well as explained. So of birds, fishes, animals, insects, and mechanical structures, and these illustrations may be called painting speech, and speaking to the eyes.

INSTRUCTION THROUGH THE EYE.

This faculty is one of the group which is addressed by object-teaching, and we hardly need say that those who have the whole range of organs across the brows poorly developed (see fig. 15), should be trained with more assiduity and continued effort than those who have the faculties strongly marked; for training improves the faculties, by strengthening and developing the organs through which they are manifested. Those who have them large will grasp the truth as fast as it can be depicted; nevertheless, our proposed classification in respect to pupils who have these organs large and small, is to be insisted on. Because those in whom Individuality is large, with the concurrent faculties, will travel over five times as much ground, in a given course of instruction, or in a given time, as those can in whom they are moderately developed. They would accomplish, then, as much in one session as the others would in five, and it is only fair that those who are rapid in the acquisition of that knowledge which comes by observation, should not be hindered by those in whom these faculties are weak; besides, the studies which depend upon reflection and meditation, may come to those reasoners with five times more ease and success than they will to these practical minds, and they may really get through the course in the same time; but both, if not properly classed, would be twice as long as necessary in getting through.

ABSTRACT THINKERS.

Those in whom the top of the forehead is large and the lower part small (see fig. 15) will study abstract subjects with ease and readiness ; while one with a retreating forehead (see fig. 13) will be puzzled to comprehend the abstract, and in that field work very slowly. By a just classification of the pupils according to their talents and the topics to be taught, the education of all can be facilitated and no time wasted by one waiting for another.

THE ANALYTICAL THINKER.

But Individuality is the open door through which specific facts as well as objects are recognized. If the reader will observe the manner in which a man talks who is particularly full just above the root of the nose, where Individuality is located, he will notice that he insists on specific declarations, on definiteness of statement ; and more especially if the forehead be full in the middle of the upper part where Comparison is located, he will divide subjects and subdivide, and deal with each department separately from everything else. He will individualize the topic, and argument, and not mix up the parts of his subject; but where this organ, Comparison, is small, there is frequently a generalizing tendency. Such a person will talk about everything in general, and nothing in particular ; will seem to have no starting points, and he will deal with a subject very much as a stupid person would who should take his scythe and climb over the fence into a field of grass and commence mowing anywhere but at the right place or edge, cutting here and there and everywhere, without regard to consecutiveness or order.

ABSENCE OF MIND.

Some persons are inclined to wander in their thoughts, when the teacher or conversationist is defining or explain-

ing a subject. Those, however, who are fully developed at Individuality, will watch the speaker, keep their eyes wide open and upon him, will not sit with half-closed eyes, dreaming, as if they did not half understand the subject; but will lean forward, drinking in every word, letting no gesture, intonation, or statement escape their attention.

SPECIAL KINDS OF TALENT.

Teachers will rapidly learn, under the light of this method of investigation, which of the pupils can take facts, and feel an interest in them; which will watch for the illustrations with most interest and profit, and when there is a class, or section of a class, under instruction, will see which pupils have a weak development of the perceptives, and strong reflective organs. In such cases we would suggest that the general explanation be first made, the logical statement set forth clearly, and the ultimate result given; then the question may be asked, if the class wishes to go back to the foundation and watch the progress of the structure, and they then will be willing to go back, and will enjoy all the steps that have led to the result. The teacher may be certain that these square-headed boys and girls will feel no interest in the details until they have some inkling as to what the details refer to.

MAKING PAPER: TWO WAYS OF LOOKING AT IT.

The process of manufacturing paper would be wonderfully interesting to one of these retreating foreheads. He would hear a rumbling machine, and rush up to see what it was that made the fearful noise; and there he would see dirty rags being cut up into ten thousand pieces, and the machine running with such rapidity as to make a continued roaring, and it would be very exciting to him, without regard to the ultimate result. As he went into the next room he would see certain great vats and boilers, and he

would ask: "What are these?" and there he would see that the dirty rags, which he saw in the process of being cut, were now undergoing the bleaching process. He would learn that certain acids and alkalis were working at the rags and cleaning them until they became as white as snow, and still he does not ask: "What are you doing this for?" but he sees what is being done, and rejoices in that, without regard to what it may be done for. He is then introduced into the grinding mill, where the rags are reduced to pulp, and as it floats around in the vat or engine it looks like curdled milk. He next goes where by the processes of machinery these rags, now a milky pulp, are being worked into beautiful white paper. He sees how it is dried, and sized, dried again, and ruled and cut, and brought into condition to be used for the manufacture of ledgers, account-books, writing-books, and letter-paper. He has followed the rags through all the processes from dirty, worthless, and disgusting things, and seen the material come out in the form of fair and beautiful paper, and has thus been educated from things and facts to results and ideas. He has learned the why and wherefore from the facts and details.

How to teach the same thing to the thinker.

The boy with the square forehead must be first taken into the finishing room. He must see the complete ream of paper, and as he saw over the door "Paper-Mill," as he came in, he looks for paper first, and when that is shown him, his reasoning organs begin to ask: "How is this constructed?" and the last process before completion, namely, the ruling, must be shown him. Then the process of forming and drying the paper, then the process of grinding the rags, then the process of bleaching, and then the first rude process of assorting and cutting the stock; and there also he sees a bale of stock untouched, and he

looks at that and thinks of the white paper and says: "Is it possible that that dirty, ragged stuff can be made into such beautiful white paper?" Then he is ready to begin with the dirty stock, and go through as the first boy did, and follow the process from the beginning to the ending. But in order that he may understand paper-making with his cast of mind, he must begin at the ending and go back to the beginning in a reverse process. When the two boys are dismissed from their visit to the paper-mill, one going through it one way, and the other in the opposite direction, they are equally well-informed. Both have become acquainted with the facts; both have learned something about the philosophy of the process, and both can go home and describe it, remembering all their lifetime what the process of paper-making is. But they learned it by entirely different methods. One form of instruction would not have answered for both. One must take the facts by the observing powers; the other must, by the exercise of the reasoning faculties, go back from effect to cause.

READING AND SPELLING.

In reading, the faculty of Individuality is trained. Those who can see the letters and their combinations most readily, or detect most readily if a letter happens to be turned wrong-side up, or if the top of an *h* or of a *d* be broken off, will make the best readers, so far as seeing what the words are is concerned, and spelling is greatly aided by this faculty. The looks of a word as a whole, though it may employ the faculties of Size and Form nearly as much as Individuality, will impress the mind of the observer as to whether it is correctly spelled; and who has not, when in doubt about the spelling of a word, hastily written it, to see how it would look, written one way or another?

TYPE-SETTING AND INDIVIDUALITY.

This faculty is employed successfully in some of the

trades and arts of life. In type-setting, for example, he who has a high degree of Individuality, can quickly put each type in the right place. He can see one special type, how it lies, and how it is to be picked up, and turned, or not turned, to be put into the "stick," as it is called; he is the one who will accomplish most in that direction, and the instant he has found one type or letter, and recognized how it must be handled, in order to set it correctly, he lets his eye fall on the next box, which is filled with the next letter, and catches the image of another. He does not wait till he gets the first letter fixed, before he looks for the second, but he lets his eye go a notch ahead, all the time, and thus he will pick up type as fast as a chicken will pick up corn; but persons with small Individuality have to *look* before they can identify a letter, and they get in the habit of making motions with the head and body; printers call it "ducking and bobbing." Printers with a full development of Individuality are not likely to make that motion.

TACT IN TRADE.

Persons employed in variety stores, require this faculty strong, together with Locality and Order, to remember where the different articles or goods are. A clerk with a full brow, especially in the center, will at his leisure be looking all around the store, identifying different things, and studying their nature and their names, their prices and their uses, and will learn as much of that kind of knowledge in three months, as one with a heavy top-head and a deficient brow will in a year. Those who wish to employ clerks in book-stores, in drug-stores, in fancy stores, in hardware stores, where many things are to be recognized and understood, will see to it that those they employ have a large development of the perceptive organs, especially of Individuality. Two persons of this sort would be worth

as much as three or four of the other sort in daily life, outside of the school-room, where we ought to learn the facts which outward life will employ in the conduct of its affairs.

MANUFACTURERS NEED INDIVIDUALITY.

Instances will occur to the reader where observation and perception are requisite to his success. In a manufactory where there is much machinery, and many details and processes to be attended to, the observer is the one to be useful. In the daily duties of housekeeping, the observer is the one who keeps everything tidy, and accomplishes promptly the duties required. Let two persons go out picking berries, each anxious to get as many as possible; the field being the same for both, the one with the full brow will think the berries are thick, and the other will gaze, and not see them quickly, and think the picking is poor, and will go home chagrined and mortified, with the basket half full, while the other comes with a full basket, and thinks the berries were very thick; and the one who has picked the basket full will "look over" his in less time than the other will "look over" his half basket. Besides, the one with the full basket will present his berries clean and ready for the table, and the other, after all his care, will have here and there a leaf, or a stem, or a poor berry.

CHILDREN IMPROPERLY BLAMED.

We hardly need suggest to the mother that if she understands as well the capacities of these two boys or girls, as we hope she will, when she has finished this chapter, she will cease to praise one for being attentive, and willing, and industrious, and to find fault with the other for being stupid and a blunder-head, not caring to do right. It is quite possible, that when these boys come to struggle with their lessons, the one with the heavy top-head may be able to understand the theory and philosophy underlying the

subject, while the smart one, having got into something a little more profound than berry-picking, will be compelled to lean upon his delinquent brother for the knowledge that comes through the upper half of the head, or through the reflective and retentive intellect.

The young should be taught to *look*, to *criticise*, to *observe*, to let nothing escape attention and pointed investigation. Those who pursue the natural sciences, which so largely depend upon observation, need the best condition of the perceptive organs, as to Development, Activity, and Training. The physiologist, the chemist, the pathologist, the botanist, the entomologist, the ornithologist, the geologist, and the rest, must see and discriminate sharply—must use perception—for it is through the activity of these faculties that he obtains his knowledge.

INDIAN OBSERVING POWER.

The North American Indian has a large development of the organs of observation, as will be seen by the fullness across the brow of fig. 17. The reasoning organs, located in the upper part of the forehead, are better developed in this powerful chief than in Indians generally, whose foreheads seem very retreating, from fullness at the brow and deficiency above. What strength of temperament and character are seen in this face, and in the width of the head, and its height at the crown! The Indian wanders through the forest without roads or marked trees, and never loses his way. He observes the peculiarity of every



FIG. 17.—SIOUX CHIEF.

thing he sees, and, it is said, he will track the bear, when the dry leaves deeply cover the ground, and he will know the size of the bear, the way she was going, and the speed; when a white man carefully looking, can see no marks of bear's footsteps. The character of the bark of the tree tells the Indian which is North or South, the moss being more abundant on the shady side.

INDIAN STORY.

As an instance of close observation and critical perception by the Indian, a story is related of one who lived where white men had trenched upon the red man's domain, and thus brought the two peoples in contact. He had killed a deer, and hung the hind-quarters on a tree, as high as a tall Indian could reach, and leaving it there, he pursued his tour of hunting. During the night a little snow had fallen, and the Indian returning the next day for his saddle of venison, saw that it had been stolen. He set about ascertaining what kind of person had taken it, and how he might be identified. He observed the indications with a detective's tact and sagacity, and started off in pursuit of the lost property and him who had taken it. He was certain he would know the man anywhere, even though the venison were disposed of. Meeting a settler he asked him if he had seen "a little, old, white man, having with him a short gun, and a little, bob-tailed dog, and carrying a saddle of venison on his shoulder. Such a man has stolen one from me." The man who was thus accosted replied that he had seen such a person with such a dog, gun, and venison, and asked how he knew all about it, and whether he had seen the thief. "O, no, I have not seen him, but I know it was a *little* man because he piled up things to stand on to reach the venison. I know he was *old* because he took short steps; that he was a *white* man because his toes turned out as an Indian's never do. I

know that he had a *short gun* because I saw where he set it down in the snow by a tree, and noticed the mark the muzzle made where it leaned against the tree. I know the dog was a *little* one, because his tracks were small and near together, and that he had a *bob-tail*, for I saw where he sat down in the snow to wait for his master, while he was getting down the venison."

SELF-TAUGHT.

Having no science and cultured civilization, the son of nature studies *things*, and learns and remembers by observation, and his Perceptive organs thus become wonderfully acute, and show us how culture may be applied to the faculties, as aids in science, and in the daily economies of life.

Teachers, when they know the natures of this faculty, separately, and its office and influence when it acts with its fellows, and the many ways in which it can be brought into use, will see the opportunity, in every part of their teaching, how to awaken interest in the pupils, how instruction may be readily imparted, and thereby the progress of learning greatly advanced, and the drudgery of teaching essentially mitigated.

The teacher soon finds that he has disposition as well as talent to deal with. Having given some general statements in respect to perceptive and reflective intellect, and having shown how the first intellectual faculty opens the mind in a practical way to all the realms of truth, we invite attention to some of the propensities and emotions before going on to complete the analysis of the other intellectual faculties; because the child has to be regulated in his dispositions as well as being instructed in regard to facts and ideas.

INTELLECT NOT THE WHOLE MAN.

It is not the whole of education to inform and guide the intellect. Teachers are very apt to start with the

thought that they are expected only to develop the understanding, to store the memory of the pupil with facts, and to train him to think. This of course is the ostensible sphere of the teacher, and if children had intellect only, or according to old mental philosophy, PERCEPTION, MEMORY, and JUDGMENT, education would be a comparatively simple task; but when it is considered that the pupil has propensities and passions, affections, aspirations, sentiments, imagination, and moral qualities, as well as intellect, to be dealt with, the problem of education becomes complicated. We often hear the statement from those who are guided in their ideas of mind by the old-school mental philosophy, that there is an education of the heart as well as of the intellect. By this we suppose they mean the same that we do when we say the sentiments, affections, and propensities need to be educated as well as the intellect.

TWO MODES OF EMOTIONAL ACTIVITY.

There are two ways of training and educating the emotional nature. One may be called the normal and the other the abnormal. We learn bad habits; we acquire good ones. The imagination, for instance, may be diverted from its legitimate action, and led into the realm of wild and romantic fantasy until the mind loses its just balance. The faculties which give energy, courage, industry, and force, are frequently perverted by training so as to act in the form of low and quarrelsome dispositions. Prudence, arising from Cautiousness, may be diverted to fear and timidity; ambition, arising from Approbativeness, may be perverted to vanity; and pride, which originates in Self-Esteem, and which gives a just self-estimation and dignity of character, may be so warped as to exhibit austerity, haughtiness, and egotism. Alimentiveness, or the faculty which lies at the foundation of appetite, instead of being guided and regulated in its action towards objects

legitimate and proper, in the use of nutritious and wholesome articles, may be so trained as to crave noxious drinks, stimulants, and narcotics, and what is true of the propensities here named, is true of every mental power; especially is this true of everything but the intellect.

The old style of mental philosophy is more nearly correct in respect to the intellectual faculties than in respect to the affective faculties or feelings, out of which character proceeds. One writer teaches us that man has conscience, and another that he is induced by the love of praise to do that which is approved as just and proper by the community. Some believe that man has by nature a spirit of devotion. Others teach that man reverences according as he is instructed to reverence, and that his religious training is the mother of his religious sentiments, and so of nearly all the emotional elements of the mind.

RIGHT VIEWS OF MIND NECESSARY.

Until the true philosophy of the mind can be understood and applied, there will be no system of instruction which shall be fully adapted to the wants of the human race. In imitation of the lessons which nature teaches, let us study to know what are the elements of the mind, and then we can impress the young learner in regard to obedience to the laws of his body, his disposition, and his intellect. Every school should teach physiology. By this we do not mean a long list of hard technicalities, but the subject of right living and right feeding should be so simplified that children ten years of age can understand it as well as they can a game of marbles or checkers. It certainly would not be difficult to inform an intelligent child that while it would be his duty and privilege to nourish the body, the entire system may be debased by the over-indulgence of appetite. If teachers would learn, in their own experience, how to nourish the body so as to insure health, and the highest

order of physical and mental development, it would not be a difficult task for them to train the young in such a way that appetite will be kept in its normal channel. As perfect health is the first condition of human happiness, if this can be attained, one-half the task of training normal propensities is accomplished. A fever of the brain or of the body causes a fevered state of all the mental functions, and especially of the lower feelings.

THE ELEMENTS OF ANGER.

So long as the teacher supposes that the whole mind is engaged in each of the emotional feelings, he will not be likely to impart to those under his charge any higher or clearer views, and it will be quite natural for one of his pupils, when indulging the feeling of anger, and when under its domination, to suppose that he is really outraged, and grossly and maliciously wronged. He feels that he is doing the right thing to chastise the object of his displeasure. When, however, he shall be instructed sufficiently in the philosophy of the mind to know that he is under the influence of perhaps a single faculty—Combativeness—his inclination to submit to its sway will be modified ; but so long as he believes that his whole mental nature is invaded, that he is suffering indignity and insult, and that every power of his mind should be engaged to repel it, he will of course lose his self-control, and be impelled, as by a moral necessity, to act, for the time being, the part of a maniac. It is not difficult to teach an intelligent boy or girl, ten years old, that this feeling is but the perversion of a single faculty or propensity, and that an effort should be made through other faculties to repress it.

LIKE EXCITES LIKE.

There is one law of mental action which needs but to be stated to be understood and accepted, namely, that the

excitement and exercise of a given faculty on the part of the teacher or parent, tends directly to excite the corresponding faculty in the child or pupil; yet nothing is more common than for a boy who is gritty and fractious in his temper, to be treated with severity and annoyed with provoking threats by the teacher. There seems to be an erroneous general idea that we must meet might with might, severity with severity, quarrelsomeness with a corresponding state of mind; and most teachers, when they come into the presence of a boy of rough temper, feel that they must put on a stiff face, and a firm voice, and a rigid form of statement, just as they would hold a head-strong horse with a stiff bit. If Combativeness and Destructiveness are the leading qualities of a child's mind, it is the true philosophy not to awaken these feelings, but to talk to something else. The boy may have the sentiments of honor, justice, kindness, affection, any one of which qualities may be easily awakened by a kindly address, and his Combativeness will subside. We have seen a party of angry men ready to commit violence in the destruction of property, and possibly in the shedding of blood, who were quieted by some wise and well-balanced person. The men would have resisted bludgeons and blunderbusses bravely, but when a benevolent man with a calm face calls them "friends" or "gentlemen," and asks permission, as a friend, to communicate to them some thoughts that might seem true to them, they listen, and in five minutes are ready to defend and protect, with their lives, that which they had just been plotting to overcome and destroy.

How to train the timid.

On the other hand, pupils who lack energy, who have too little of Combativeness and Destructiveness, having narrow heads in the region above and about the ears, require to be built up and excited, in the region of force

and courage. To such persons emphasis should be given to directions. There should be spirit in the instruction of the teacher which would excite bravery and force; but where these feelings are very strong we should never add fuel to the fire of passion, by angry words and denunciatory treatment. The most successful administrators of government in school, whom we have seen, are those who had thorough control of their own temper. A plain, calm, truthful statement of a child's delinquency, would awaken his understanding, his moral sentiments, and his affections on the side of truth and duty; while the combative element, not being addressed, becomes placid and quiet; in short, it is thrown into the minority. Then all the pupil needs is simply a suggestion as to what he ought to do, and he hastens to accomplish it as he would to escape a great difficulty when the proper course should be pointed out to him.

Right Mode of Punishment.

But we may be told that some headstrong, quarrelsome natures can not be won over by this patient, gentle appeal to the other faculties. Admit it, and this brings us to say that nearly all the whipping that is done in schools and in families does more harm than good. We say nearly all. We have said that the exercise of a given faculty in the parent or teacher awakens the corresponding faculty in the pupil. Suppose then that the child is angry, mischievous, and wicked, and really needs to be punished. Admit that he is one of the kind that can not easily be reached by collateral influences; that he must be addressed through his sense of feeling, rather than through his moral sentiments, self-respect, or ambition. Let there be no haste in the punishment. The more deliberation and coolness that shall be exemplified on the part of the administrator, the better. If a time, three hours distant,

should be set for the settlement of the difficulty, it would have a good influence, for it would give the child time to cool off and think over his delinquency or crime, and thus all the faculties of hope, and fear, and shame, and judgment, and affection might become active, while the irritation of the faculties which produced the disobedience would have subsided.

MORAL EFFECT OF MODERATION.

Then, the adjournment of the case indicates deliberation on the part of the parent or teacher, which has a good effect in its appearance and often in reality. Certainly it gives all angry feelings time to subside. When it is decided, after calm deliberation on the subject, that there seems to be no other way but to inflict some kind of punishment, either a denial of some desired object, to-morrow or next week, or the infliction of corporal punishment at a time not distant, the child begins to wish to take the whipping and have done with it. He does not want to be talked to any more, nor be obliged to think of, and dread the punishment any longer. He feels tender, mellow, and sorry, and has come to the conclusion that he is looked upon not as a mere object on which the wrath of the parent or the teacher is to be inflicted. Then a few well-laid-on blows, slowly, deliberately, and sharply administered, giving time for each one to strike in and take full effect, it would seem to the delinquent as if the punishment were very severe, but it being inflicted with deliberateness, he would not regard it as vindictive. One such whipping would be likely to last a child a year, perhaps five years, or a lifetime. But when the teacher or parent detects the delinquent in some mischief, and roughly seizes him and gives him a severe thrashing, and the blows are piled on thick and fast, it only makes him more angry, and he wishes he had the strength to vindicate himself on the spot, and he would do

it then and there, if he had the strength to defend himself. The manner of the punishment, not the frequency of it, nor the severity of it, produces reformation.

"BREAKING THE WILL."

The common idea that a child's will or temper must be broken is erroneous. The whole nature of the child needs to be taught obedience, but we would neither break his will nor crush his temper, but teach him how to use both, or the elements which produce them, in obedience to all the laws of his being, and of all the rights of those who surround him. We praise a boy's bravery when it is legitimately exercised; we glory in his steadfastness when he uses it properly. It is only when he sets up his will against the requirements of parent or teacher, that they think his will is a very bad faculty, and that his temper will be the ruin of him. We assert it without hesitation that a person with a high, strong temper, may be so trained that he will use it in obedience to all that is lawful, just, and moral. Anger, like fire, should be kept within its legitimate bounds, then it becomes energy and courage, instead of quarrelsomeness of spirit; and this is an element as important in character as lemon-juice is in lemonade.

EDUCATION COMPLICATED.

The errors in the method of education, and the impediments which stand in the way of properly calling out the faculties, being understood and removed, we shall then be ready for the proper method of bringing each mind forward according to its best capacities.

To EDUCATE is to draw out, to call forth, or lead the faculties of the mind toward proper subjects and objects according to the normal qualities and peculiarities. To TRAIN a faculty is to guide, control, and regulate its action, until that action becomes habitual. As no two minds are

alike in organic constitution, and in the relative strength of the different faculties and propensities, the subject of education is really very complicated, and the more there is to a character, the more high-toned and intense are the faculties; and the more complicated is the being of the individual, the more refined and nice the process of education must be to do justice to that mental constitution.

As we have before intimated, mental philosophers, previous to the discovery of phrenology, admitted a few general powers, trying to derive from them, in their method of thinking, all the particular manifestations. Many of them considered the intellect as the cause of the feelings. They accordingly confined their efforts in the way of education, to the intellect or understanding, and did not think of cultivating or educating the feelings.

CORRECT PHILOSOPHY OF MIND ESSENTIAL.

Of course the first thing to be done in the direction of a correct system of education is to ascertain the primitive powers of the mind, and, as these powers exist independently of each other, even as eye-sight and hearing are distinct from each other, each mental faculty must be exercised for itself. A man does not obtain strength of muscle by witnessing the exercises of athletes, or by reading treatises on muscular motion, but every muscle must be exercised for itself. Every mental faculty is under a similar law; each mental organ grows by proper exercise, and becomes strong by use, and its motion, or power, or function, becomes facile and easy in proportion as it is trained under the right rules of action. Dancing, fencing, military drill, mechanical or artistic effort, have to be learned or acquired by practice, and music is subject to the same law. So the faculty for geography, for figures, or for drawing, must be exercised for itself respectively; but the best way to exercise the faculty of number, or calcu-

lation, for example, is to show the real objects; and he who planned the calculating board, with balls to slip on wires, so that the child could see three in one row and four in another, was a benefactor. To say three and four are seven is very abstract, but let the child see three in one row and four in another row, and count them, and he soon learns to estimate them by quantity of numbers, or quantity of things.

OLD WAY OF STUDYING GEOGRAPHY.

Within the present century there was a time when no school atlases existed, and long descriptive paragraphs had to be committed to memory. We remember one, the question being: "How is the Ohio River formed?" The answer was quite lengthy, but this is its substance: "The Ohio River is formed by the junction of the Alleghany and Monongahela Rivers. The first rises in the mountainous districts of New York and Pennsylvania, and runs two hundred miles in a south-westerly direction to Pittsburgh. The Monongahela River rises in the mountainous districts of Western Virginia, and runs north-westerly nearly two hundred miles, forming a junction with the Alleghany." Teachers and pupils will laugh at such a clumsy method of studying geography, when they have only to look at the map and see the branched river called Alleghany, rising in the Alleghany Mountains, and the Monongahela rising in another portion of the same mountain range, and flowing together to constitute the Ohio River, at Pittsburgh; and in order to know where the Ohio goes to, he is not obliged to learn out of a book with no map to give him the fact, that "the Ohio River thus formed flows in a south westerly direction many hundred miles, and empties into the Mississippi River." Suppose a man were to write such descriptions of the rivers of Africa, would we not hunger to have him state the latitude and longitude where

such a river was flowing? Would we not take our atlases, which represent the unexplored regions, and trace out the river with a pencil on the blank field of the map, and have something we could look at, and thus exercise our faculties of Individuality, Form, and Size, as well as Language?

PICTORIAL INSTRUCTION.

Pupils are now permitted or required to draw maps. This brings into use, besides the faculties named, that of Constructiveness. If geography can be studied better by having a picture of the thing described, in the nature of a map, why should we not, in like manner, contrive artificial signs for other ideas, or perceptions? Children learn to read words and repeat them like mere parrots, without understanding their meaning. We desire, first, to excite perception, then sensation, if we can, and then indicate them by particular signs. With what delight does a child look at a picture book! He has seen a cat, and we show him a picture of a cat in the book; we show him the three letters which form the word cat and he looks at it and sees the difference between *c–a–t* and *m–a–t*. He knows the difference between "cat" and "mat" in reality. If he can be shown the mat and the word that represents it, he will quickly learn to associate the word in its form as well as sound, with the thing, even before he has learned the names of the letters. The whole system of object-teaching is based on an exercise of the perceptive faculties by showing the thing or the picture of the thing talked about. For instance, give a child six years old the word Hexagon, and what idea does it communicate to him? He learns the letters and how to pronounce them, but the word and the sound have no meaning to him. But if we put a hexagon before him—a form with its six sides—and an octagon with its eight sides, or the pentagon with its five sides, he can be taught by their shape alone the difference; and if the

names hexagon, octagon, and pentagon are explained to him, that one means a six-sided, another an eight-sided object, and the other a five-sided one, he never will forget that, and it becomes to him a technicality for life, as distinct, and as clear and fixed as the name "chair" or horse."

EFFORTS IN THE RIGHT DIRECTION.

Efforts have been made in the right direction often, but not always with the right philosophy; consequently, the actors, or inventors, have mixed a great deal of chaff with the wheat. There have been efforts for the construction of juvenile books in harmony with this philosophical and progressive system of education, to depict an article which is the subject of study, if it is not otherwise easily understood by the pupil. But a child will learn to spell *e–g–g* a great deal quicker if the picture of an egg be above the word, for then the one will suggest the other by some subtle alchemy of the mind, by their association and impression. The old peripatetic philosophers who used to travel with their disciples through fields and forests, by streams and seas, were following nature more wisely, perhaps, than many an educator who is quartered with his pupils in a majestic pile of architecture called an academy. How many people complain of the expense of museums of geology, chemistry, mineralogy, entomology, natural history, or anatomy! There is many a farmer who intends to educate his son, who will look through these great museums and wonder what on earth can be learned from so many bits of stone, so many shells, and fish-bones, and stuffed birds, so many bugs and insects, so many skeletons and anatomical preparations of the human system!

A WAY OUT OF A DIFFICULTY.

Of course objects in respect to which pupils are to be educated, must more or less depend upon what is to be

their future career of life; but since all persons ought to be educated in reference to that which necessarily comes in immediate contact with them, there are a multiplicity of objects which have form, weight, color, measure, quality, that may be studied, and in their study the pupil learns the name, something of the history, origin, and uses of the thing, and he also learns the quality, that is to say, the thing itself. We learn to spell thousands of words, and the words are as abstract and meaningless as the names of the Chinese people are to us. We remember when the word *ichthyology* was a poser for spelling, and the one who having the most of the rhythmic faculty that remembers mere sounds, and, perhaps, the most of Individuality and Form to remember the queer combination of letters, would "spell the rest down." I do not know how many years elapsed after I mastered the spelling of the word with certainty before I learned the meaning of the word ichthyology. The word *phthisic* and a few more of those meaningful words without any meaning, were test words, but the meaning of them was never vouchsafed. We had in Webster's Spelling-Book a few pages of words which had a definition of their meaning, commencing, "Ail, to be troubled; Ale, malt liquor;" and it was to the pupils the most interesting lesson in the book. Thus pupils spend the best part of their life in learning to spell words, in great part, without learning their meaning, and though our method of spelling in English is crooked and difficult to the last degree, and unfortunately without any law or analogy, even the English language could be mastered if all the words that could be represented by a symbol could have such symbol related to the word itself. If there could be a fish connected with the word *ichthyology*, and that was understood to mean the science of fishes, there would be some sense in learning to spell it; but take the great number of words that

could be represented to the child's eye, such as cat, dog, fence, house, horse, ox, well, river, rock, key. as well as articles with specific form, like parallelogram, triangle, right-angled triangle, equilateral triangle, and pupils would learn about them very easily. These are abstract ideas which require a string of hard words to explain them; but if the teacher who can draw on the black-board rapidly, or can have printed charts, to be handled as a lecturer handles his illustrations, which could be made and afforded cheaply if demanded in large amounts, for all schools, we would like to see the effect of educating the perceptive faculties by means of these things, and the training of Language, Tune, and Eventuality, to remember the names before the children had learned to spell even one of the words expressive of the things exhibited.

We think a system of education could be established, embracing suggestions from all methods that have been felt after and found, by means of which the observing faculties could be called out in a manner that would astonish teachers. We would like to see a class of pupils trained to spell the names of articles when presented, the name being pronounced, and then let the pupil spell it by sound only, without having learned the letters.

SPELLING A DRUDGERY.

There is, doubtless, to-day more time spent in trying to learn to read and spell, than there is devoted to all other branches in the common schools; or, we may say, to learn to read and spell well would require as much study as is bestowed upon all the other branches. Unfortunately for the English-speaking world, our language is defective, because it lacks the phonetic element. But few words are spelled as they are pronounced. Some languages, the German, for instance, require the pupil only to learn the letters and the sounds of the letters, and then he can spell

any word in the language, and pronounce any word he sees, with three or four exceptions. But when we look at our English language, which is made up of the odds and ends of many languages, we find that the sounds of the letters have very little to do with the spelling or with the pronunciation. If we take the words *through*, *though*, *cough*, *tough*, *plough*, *hiccough*, we see what a variety of sounds come from the letters *o u g h*. These four letters are made to spell oo, o, awe, u, ou, uf.

PHONETIC SPELLING.

We ought to have a character that shall represent each sound in the language, and it should not represent any other sound. Then learning the alphabet would be learning to spell, and learning to spell would be learning to pronounce, and that would be learning to read. Some people never learn to spell. It does not belong to their mental constitutions to remember how to spell, and they may be good scholars in all other respects. Some will take to spelling and be very skillful in it, but they will not be sound or strong in any other department—these differences, of course, depending upon the peculiar mental development. If we could have a phonetic system of language, and then object-teaching in connection with words and names, we could simplify education wonderfully. Then pupils could understand the meaning of the words they use, and words would then become to them ideas. Words should be considered simply as signs of ideas, and ideas should be had first, and the words afterwards. Then pupils could comprehend the word, and the idea suggesting it. The familiar object—clock or horse, boot or hat—does not require special thought to suggest the name. The thing imparts the idea, and the name then comes easily.

MIXED IDEAS.

When we have progressed with pupils through a series

of simple things, objects, with their forms and characteristics, and they get the name of each, and the way to spell it, we may rise above tangible things and proceed to the realm of feeling, or emotion, recalling the sensation which they have experienced, such as hunger, thirst, warmth, cold, fear, anger, kindness, and other emotions. Let these sentiments or conditions be fully understood, and the word which expresses that condition be presented and pronounced; and let the pupils scan the letters which constitute the word *cold*, and think of the sensation, and the whole lesson as respects that sensation, and the word which expresses it is before him.

SENTIMENTS SUPERIOR TO SENSATIONS.

We may rise higher than that. We may speak to pupils not merely of bodily feelings, but of mental conditions, such as pride, ambition, respect, affection, hatred; and the teacher should know what is the natural language of these emotions, and he will not speak of gentleness or peacefulness with an abrupt and harsh tone of voice, or frowning features, because that would instantly excite in his observing pupils a feeling of anger and repulsiveness, which would be educating them contrary to the text of the lesson. Mutes, who never hear the tones of voice, watch the gesture and expression, and thus get the idea from the teacher very clearly.

ALL FACULTIES BROUGHT UNDER CULTURE.

Since a great portion of the time of each year is devoted to receiving instruction, and as an education, so called, requires many years to compass it, every facility which mental science furnishes should be adopted in order to cultivate the perceptive or knowing faculties, and awaken and train all the emotional elements in such a manner that the child is all-alive to the just impressions which it is the design of the teacher to make. It is easy to understand

that if the teacher wishes to excite his pupils to laughter and mirth, he puts on a pleasant, smiling countenance, before he commences to tell a mirthful story, and a hundred smiling eyes are on him. Attention, intense and pleasurable, is shown in every face, and he does not then have to say things that are very funny in order to excite the emotion he wishes. The same is true in regard to justice, mercy, fear, love, and hatred. In this way the moral, social, executive, and intellectual faculties may all be called into action harmoniously, or consecutively, as may be desired, and an impression, pleasurable, but vivid and lasting, may be made.

Every faculty is possessed by each individual who has a sane mind, in greater or less degree, and each faculty may be combined in connection with other faculties. If children are trained by an appeal to the different intellectual faculties, and then in such a way that two or more faculties are called into harmonious action, the mind is trained to become automatic or suggestive. One emotion awakens another—one fact excites a train of facts. A person so educated that he can bring many faculties into combined action is as much richer in his mental life than others not so cultured, as a full chorus is richer than a solo, in music.

PARTIAL DEVELOPMENT GIVES PARTIAL SKILL.

If we had a correct method it would not take half the time that it now does to give pupils the usual amount of education. Consequently a thorough course of education ought to be much cheaper, and those who now have time and money for only half an education could then be educated as well as the best now are.

There ought to be some means devised by which the methods for teaching, as well as the pupils, could be classified. If all teachers had perfect heads, were developed in each faculty in equal degree, and all were *amply* developed

and well cultivated, then each teacher could instruct every pupil in every department of education with equal facility and success. But unfortunately this is not true. One teacher is amply developed across the lower part of the forehead. He can teach *things*, and ought to teach them and stop. Another is amply developed through the middle of the forehead. He is adapted to teach history and the facts of science. Another is strongly developed in the upper part of the forehead, and he can teach ideas, but is not successful in teaching things or history; and he will talk to pupils on abstract ideas and try to come down to the practical, but only half a dozen in a hundred, perhaps, will have heads shaped like his own, or have a cast of intellect that will correspond with his, so as to understand him properly.

TEACHING DIVIDED IN COLLEGES.

In college, teaching is divided among a good many professors, especially if the college be large and rich, and the pupils numerous. There should be one teacher for each branch of knowledge—unless, as we have said before, the teacher is amply and equally developed in all his faculties. There should be one teacher for history, one for geography, one for the mother-tongue, one for Latin, another for Greek, one for chemistry, one for mathematics, another for belles-lettres, and each of the pupils would have this advantage—if the teachers were rightly selected according to their talents and culture—that the teaching would be of the best, because in such a school, and under such a system of education, a person would not obtain a situation as a teacher of some specialty, unless he were well qualified for it by nature and by culture. Then if pupils were brought out and classified according to their mental capabilities, dispositions, and temperaments, a teacher thus qualified would give them the best possible instruction, in the shortest possible time.

MONITORIAL INSTRUCTION.

In the common schools the monitorial system might be introduced to advantage. Some of the more advanced pupils could assist teachers. A large class might be divided into five classes, and a monitor appointed to each class, according to their mental and temperamental organization. In this way the advanced pupils, by becoming monitors, would learn to teach, and perhaps their method of explaining would be more in harmony with the understanding and mental calibre of the pupils than the teacher's method. But we do not despair of having the different branches in our public schools taught by special experts, no matter if the person be well qualified to teach everything. If he devote himself solely to language and literature, to mathematics, or any other department of science, he will become far more capable of bringing the highest order of talent and vividness of instruction to bear upon the subject than he possibly could if he were to devote himself alternately to all the varied branches.

SPECIALTY IN TEACHING.

In medical colleges this rule obtains. One man is professor of anatomy, another of surgery, or of physiology, of pathology, of chemistry, of theory and practice, of toxicology, of histology, or pharmaceutics. And why should not our common schools have one teacher for instructing in objects, another in grammar, geography, and history, and whatever other topics are taught? But when a teacher professes to instruct in music, in drawing, elocution, literature, and science, he must be a genius to have learned everything so as to be competent to teach it, or he must be poorer than the best in some things.

INTELLECT AND EMOTION SHOULD COMBINE.

Not only should all the intellectual faculties be addressed, according to their nature and the quality of work they have

to do, but teaching should be so adjusted that the feelings which go to make character should coalesce, as far as possible, with the intellectual culture. This obtains in regard to many of the phases of life. We have a Naval school where instruction in navigation is given. Our Government sends midshipmen to sea to put in practice the things they are taught in school, and when boys expect to become navigators they take special interest in all that relates to their future field of effort. So in the school of mines, boys look at stones, containing metals, with as much interest as their sisters look at the jewelry which is ultimately to adorn them. If one is being trained to cavalry service, he studies the horse as much as he studies tactics, and cultivates his spirit and courage, as well as his intellect, in reference to the science of war.

THE MORE FACULTIES ENGAGED, THE RICHER THE RESULT.

It is a rule in phrenological science that the greater number of faculties that can be brought into co-ordinate activity, the higher the sensibility and the more exquisite the enjoyment; and this constitutes one of the differences between the uncultivated and the cultivated. The farmer admires hills, and mountains, and meadows for the amount of timber, and grass, and stone he may be able to produce from them; but citizens who have had more culture in reference to art and scenery, who have had their eyes trained to see beauty in hills and valleys, rocks and streams, will go into that farming neighborhood, which has been looked upon with the dullest sense of utility, and see charming sweeps of hill and dale, forest and stream, and become delighted, and perhaps bring an artist to paint a costly picture of some choice scenes among the hills and mountains, while the farmer would look on with mute derision, and feel that one acre of the woodland slope that adorns the picture is worth more than the three thousand

acres as they are represented on the canvas. We are acquainted with men who looked with dread upon the hills and mountains we refer to, when boys, as too steep and rugged to be at all agreeable or tolerable, who have since gone back to them with admiration, and wondered they never could see any beauty there before. They have gone there with their artist, and treasure the oil paintings of these mountains, while their old neighbors think they have grown foolish by their residence in the city. Breadth of being, height of enjoyment, and intensity of pleasure, then, come from extended culture of all the faculties ; and the difference between one man and another may not be great originally, but let one boy in a family, not superior to the rest, go away and obtain richer and broader culture, and it will lift him entirely out of the companionship of those who were nurtured under his paternal roof. He outgrows them altogether, and learns to see beauty and richness in that which, to his brothers and sisters who have remained at home without culture, seems meaningless and frivolous.

DISPOSITION AS WELL AS TALENT TO BE EDUCATED.

Until parents and teachers become fully impressed with the fact that a great part of the mental nature of the human race is emotional, not intellectual, and that the faculties which give the most trouble in the training of children are simply animal propensities, or blind instincts, which spring into spontaneous activity, or are sometimes excited by the action of the intellect, their efforts in the management of the young will be impractical and unsuccessful. Among the faculties which give the most difficulty and disturbance in the training of children, those which produce anger and stubborn disobedience are, perhaps, the most conspicuous. This tendency of character

arises sometimes from Combativeness alone; sometimes it is connected with Destructiveness, and the manifestations become severe and often cruel.

COMBATIVENESS AND DESTRUCTIVENESS.

Combativeness imparts to the individual a very resolute, courageous spirit, and gives presence of mind in the hour of danger, and enables one to meet opposition bravely and drive onward to success. We would by no means crush out nor smother this organ, nor that of its neighbor and coadjutor, Destructiveness, even when large; but we would



FIG. 18.—DAVID S. MCKIM.



FIG. 19.—SAMUEL J. NORCROSS.

McKim was convicted for the murder of Norcross for his money, $2,000, near Altoona, Pa., January 18, 1857. They were traveling together from Illinois as friends. In McKim, the region of the selfish propensities was very large, as the width and fulness of the lower side-head shows, while the same region in Norcross was moderately developed, as shown by the narrowness and flatness of the side-head. Combativeness, Destructiveness, Secretiveness, and Acquisitiveness are located in that region.

aim to train them in harmony with, and in obedience to, the other faculties. They are to the man and horse what steam is to the locomotive, and we would have them harnessed to the intellectual and the moral faculties, and then they will lead to the highest practical benefits. Combat-

iveness and Destructiveness, the first giving courage, and the second thoroughness and severity, are as necessary to character as hardness is to steel in the cutting instrument. Sometimes the axe or the knife is too soft, has not temper enough, it bends and bruises by use; sometimes it is tempered too hard and breaks. A happy medium between the two produces hardness enough not to bend, and not so much hardness as to crumble and break by use. So, when there is too little Destructiveness and Combativeness in character, the man is tame and sheepish, does not stand up to his rights and interests, is not brave and executive. If he have too much of these elements, and they are not properly modified and regulated, he flies into an unreasonable passion and makes himself a pest to his friends, and damages his interests by his rashness and undue indignation.

HOW TO TAME THESE PROPENSITIES.

The energies of these organs may be very properly worked off upon the laborious pursuits which require great force, and thus they may be made useful. We once had a horse that was so fiery, and as our neighbors said, 'wicked," that if during two days he was not worked, he would balk and fight when harnessed, and it would take hours to work off his fire and force, so that he would be willing to go quietly about his business. If there came a rainy day and a Sunday together, we learned that we must shorten his food and keep him on hay only, and thus when he was brought to his work he would go into it with a will, and after he had worked an hour or two, we would feed him some grain to give him strength for his duties.

Refractory criminals are placed in "solitary confinement" and kept on bread and water, and not too much of that; and they come to terms by the subsidence of the activity of these organs. It might be well, therefore, if a

boy be headstrong and high-tempered, to give him plenty of work on which he may exert his superabundant strength. Persons large in these elements need something to do that is legitimate, on which their power can be expended. Many a man and woman are sour in disposition, harsh, haughty, and quarrelsome, because they have nothing to do requiring strength, courage, and energy, on which they can legitimately work off the surplus force of Combativeness and Destructiveness, hence the action of these organs, in their cases, is perverted.

EARLY CULTURE OF CHARACTER.

The education of these feelings should begin as soon as the child is old enough to show anger. A calm, quiet, firm look from the mother will be understood by an infant in arms. It soon learns when it is contravening propriety by the tone and look of the mother. The exhibition of anger by the child is apt to awaken the same feeling in the parent, especially if the child be old enough to know that its conduct is wrong. We have known parents to become irritated by the anger of children less than six months old, and who would treat them harshly, and even whip them severely. Such treatment on the part of parents can not be too strongly condemned. So long as the parent remains quiet, but firm, the child's anger is not increased; but the manifestation of anger, on the part of the parent, makes the child's anger burn still more hotly, and thus Combativeness and Destructiveness, by such frequent exercise, become enlarged, and as the child increases in age, and is ripened in the evil passions by such experience, it becomes quarrelsome, turbulent, and cruel, always fighting with and tormenting others. It is a law of mental development that the excitement or exercise of any faculty, increases its activity and power; and to such an extent may this influence be exerted, that the character can be pretty

thoroughly revolutionized by the training it receives. Everybody knows that bad management will spoil a horse, especially when he is being broken, and many people know that a fiery horse, in the hands of judicious men, will become tractable and serviceable.

A CONTRAST IN TRAINING AND ITS RESULTS.

Suppose two children to be exactly alike in natural disposition, and one of them, at the age of six months, were placed in the hands of kindly, wise, good people, and he were trained up under the best relations to life; and suppose the other were taken, at the same age, to a place where wickedness, poverty, and misery prevailed; will anybody suppose that, at twenty-one years of age, the faces and the heads of these two boys would not be very different? We would be ashamed of the phrenologist who could not, in the dark, recognize the difference and describe it. We believe, if the facts could be known, it would be found that most of the fighters and rowdies who disgrace humanity had been treated by parents and others in a rough manner, calculated to inflame and strengthen the fighting organs, or rather those which, by abuse, become such.

QUAKER MODE OF TRAINING.

If persons doubt the influence of harsh or mild treatment on the future character of the child, we would refer them to the Quaker mode of training, and to its results on the character of their children. They govern their own tempers better than most others; they are firm, but kind, in the treatment of their children, and the result is, they grow up to manhood with quiet, unruffled dispositions, quite capable of self-control; and though they are disposed to debate and contend for that which they regard as the truth, they do not wrangle and fight as do others. Whereas, on the contrary, a man who has been trained in the ordi-

nary way becomes angry and intemperate in his words and actions, and this excites no special remark and awakens no surprise. But let the Quaker become wrathy and rough, like other men, and it would be such a strange fact that it would be noticed with amazement by everybody.

To illustrate this point, we would invite attention to a few facts and inferences. Many years ago I examined, in Massachusetts, the head of a little girl of four, and found excessive Combativeness and Destructiveness. On referring to the heads of the father, mother, and a younger child, I found that none of them had the organs in more than a medium degree. This excited my surprise, that none of the family except the little girl had the organ large. I suggested to the parents that the child had been much irritated in her training to induce thus early so large a development of these organs.

THE WAY IT HAPPENED.

The mother replied: "That is true, and I will explain the reason. I had so often seen, while teaching school, such a laxity of parental discipline, that I determined, if I ever had children, I would begin with them in season and make them go straight. Accordingly, this girl being my first child, I began early to make her toe the mark, and I used to train and whip her for every little offence or neglect. She has become very fretful, peevish, and violent in temper, so that now, whipping only makes her worse. A few days ago I lost my temper and gave her a severe whipping, and the moment I got through with her she seized the fire-tongs, and with a severe blow broke the back of her pet kitten that was sitting by the fire. As soon as her anger had subsided, she mourned piteously for the death of her pet She is a very bad child when she is angry, and I really do not know what I shall do with her. But I have taken a different course with my other one, and she is easily

managed, though her natural disposition is no more amiable than that of the older one was at first."

A WISE TEACHER—A BOY SAVED.

Another instance was related to me by a teacher in the State of Connecticut. A boy fifteen years old had been flogged and harshly treated at home and at school until he had lost his self-respect, and became utterly reckless of his character. So bad, indeed, was he, that the trustees in his native district had caused his expulsion from the public school. His father, almost in despair, requested a teacher in the neighboring district, who was known for his great success in managing the worst of boys, to try his son. On entering the school, the teacher lent him an interesting book, telling him he might read it the first day, and not commence to study until he had become acquainted with the new place. That night he told the boy he thought him capable of becoming one of the best scholars in the school, and that if he would try to excel, he should have every opportunity afforded him, which would enable him to disappoint the expectations of everybody. The poor outcast opened his eyes with astonishment, amazed that any one should speak kindly to and be interested in him. For several weeks he seemed to forget his wayward habits, and devoted his mind to study with remarkable success, to the surprise of all who knew his history. One day he became very angry because the teacher would not aid him, at the moment, in solving a problem. He laid down his books and sat nursing his wrath, and when the teacher found leisure and offered to aid him, he tartly replied, "I do not wish it." When the school was closed the boy was requested to remain, doubtless expecting a flogging, as in former times; but what was his astonishment when the teacher sat down by his side and said, "Thomas, I thought you were willing, and meant to be a good boy, and I had given

you a good name among all your acquaintances, which seemed to give them great joy. Must I now go and tell them that all my hopes for you are crushed, and that all my kindness toward, and efforts to help you, are lost?" Thomas wept under this appeal, for he had expected the whip or expulsion from school; and from that hour his reformation was confirmed. After he had found that one, at least, "cared for his soul," he became an excellent scholar, and was known for exemplary conduct, and a more worthy man than he now is can not be found in that neighborhood. He regards his teacher as his saviour, and dates the turning point of his life and character from the hour with the teacher at the close of the school on that eventful day.

Now, suppose the teacher had allowed his anger to be provoked by the boy's sullen insolence, and he had scolded and whipped him, as others had done, instead of arousing the boy's benevolence and friendship, and awakening his self-respect and regard for the good opinion of others, he would have gone from that school but an outcast and an Ishmael.

TRUE POLICY, SOUND PHILOSOPHY.

"A soft answer turneth away wrath, but grievous words stir up strife," is a proverb full of truth and sound philosophy, and embodies the true theory of training Combativeness and Destructiveness. Never allow yourself to become angry with a person whose anger you would control. No person can govern others who can not govern himself, because his self-control is the only means of obtaining a lasting control over others. An irritable child may have inherited this quality from an equally irritable mother, and is to be pitied more than blamed for this state of mind. How ill-adapted is such a mother, who will not control her anger, to manage such a child! Her

words are to him like fire on a blister. With such a case the treatment should be of a most kind and gentle character; let soothing tones and amiable language be addressed to it, and this passion will subside; at least it will not be cultivated and increased in strength and activity. Then a calm and efficient rebuke may be made to its moral, intellectual, and social nature which would fortify these superior elements against the future inroads of the rebellious propensities, so that the next mental mutiny may be quelled by the proper action of the child's faculties without parental assistance.

HABIT OF SELF-CONTROL.

Thus, by awakening the restraining faculties, we awaken in the child the power, and establish the habit of self-control. We do not mean that one wise and judicious treatment of a child will produce its reformation. It may be necessary to give "line upon line, and precept upon precept." Awkward habits are not reformed in a day. When the rustic enters society and tries to take on all its customs, which, to him, are strange and mysterious, he does not become in a year a polished gentleman, though he is all the time working toward it; so the child, having inherited a fiery and quarrelsome spirit might not, even in a Quaker family, in a year cease to show traces of his native pugnacity. The parent and the teacher may work with faith and hope till ultimately they will reap the harvest. If all the reform which seems desirable does not soon appear, or we seem to secure only half the success we seek and hope for, remember that our efforts modify the character and make it less vicious and turbulent than it might have been. When a heavy train is descending a steep grade, the brakemen, with their best efforts, may be able only to retard the speed and keep it at a safe point. A driver might desire to stop a fiery horse, but his strength is only sufficient to keep the

steed in the road, and prevent him from running away with the carriage and its precious freight. Shall he not do his best because he may not be able to do all he would? Shall he throw down the reins, leap from the carriage, give up the contest, and leave everything to go to ruin? So, teachers and mothers, we beseech you, keep hold of the headstrong boy or girl, and check their wrong tendency if you can not at once stop or reverse it.

TWO MODES OF MANAGING THE ANGRY.

There are two excellent modes of managing children when excited by anger. When the child is young, how easy it is to call out something interesting to his other faculties! When older, how very easy it is to relate a story, made up for the occasion, if need be, in which the child's anger may be shown up in such a light as to make it appear improper or even ridiculous. We have seen a child change in one minute from rage to laughter under the ingenious treatment of an amiable sister or judicious mother. Another method is to cool the rage of anger by pouring cold water upon the refractory child. In some desperate cases this has been found to work like a charm. A child sometimes gets angry and throws itself upon the floor, and screams, and kicks, and almost goes into a fit of apoplexy; then a stream of cold water poured upon it, thoroughly drenching it, will have a wonderful effect. This must be done in all kindness, calmness, and candor, as you would administer medicine; and while it does not require, on the part of the parent, severity, as it would to conquer with the whip, it leaves no ill effect on the mind of the subject. When the child is thus restored to its balance, it is easy to reason with it through its intellect, or reprove it through the moral feelings, or awaken the affection, the sympathy, or the dignity of the delinquent in reprehension of its past conduct.

"NO TIME TO TRY NEW METHODS."

Are we told that mothers with large families and much work to do can not take the time to try modern notions and scientific methods of training their children? They must speak sharply and be obeyed at once, or by an impending blow make the delinquent desist from wrong doing or hasten to fulfil duty. Not a few believe in this method, for many practice it; but children so trained will wrangle with each other, and be always in some broil, and they will seem to need ten times as much effort on the part of the mother to keep them regulated as would be the case under wiser and calmer administration. We have known such a family to lose the mother, and in process of time a step-mother would be installed, who fortunately was wise, well-informed, self-regulated, and imbued with the true spirit of strict, but beneficent government; and she soon brought order out of chaos. Like the Connecticut teacher, she astonished the children with a new spirit and new methods, and in less than a year, kindness, courtesy, and good manners prevailed; and some of the relatives of the departed mother fancied there must be some secret severity which had cowed and overawed the children. The children knew better, and evinced their confidence and love by every evidence of gratitude and sincerity, and many years of the most tender and intimate companionship.

As like produces like in nature, so rough and hard treatment of child or horse will arouse corresponding dispositions; and gentle firmness, guided by justice, wisdom, and love, will convert a fractious horse or a petulant and headstrong child to obedience and a modified disposition. Some have unfortunate dispositions, but by kindness and wisdom, even these can be made tolerable, and that is the easiest possible way to get along with them. The harder a

mother has to work, and the more children she has to manage, the more important it is to her and her children that she should adopt the wisest and best methods of government. Some have a genius at government and need no aid or advice. Those who do not take easily and naturally to government, may and ought to profit by the suggestions of science.

It may, perhaps, be of service to some parent or teacher to read the following extract from a written description of character, made by me, September, 1876, in the daily course of business, for a boy who was brought to our office by a lady, not his mother, who felt an interest in him, and believed our advice would aid his parents in guiding, and perhaps saving, their capable and somewhat wayward son. Much of the advice is in the direct line of the subject matter of the last few pages ; the remainder will find subjects enough for its application.

EXTRACT FROM AN EXAMINATION.

' This boy has a large head for one of his size and age, and it is developed in three or four directions pretty strongly. He has, in the first place, an excitable temperament or constitution, and care should be taken not to rasp and exasperate him. He should be treated with evenness and smoothness, and not insulted, or worried, or fretted. He has so much sensitiveness that we would have him avoid in his food everything that produces irritation, like pepper, mustard, and vinegar, and it would be better for him not to eat sugar, because that produces heat and excitement. He should not drink coffee, because that stimulates the brain and disturbs the action of the heart ; he should eat plain diet, oatmeal, Graham bread, beef, fish, milk, fruit, and vegetables. He has rather a strong appetite, and might form habits upon it that would be damaging to him and his health. He has large Destructiveness, and that

gives him a high temper, and a great deal of what is called grit; and when he gets angry, he does not care much for consequences, and he is inclined to resist everything in the way of severity or opposition. If we had him to manage we would be careful not to get him angry, and especially would we avoid disciplining him by word of censure or by blows while he was angry or excited, but would wait until he got over it, and then if the punishment were calmly administered it might be severe without producing bad effects on him. But the better way is to talk to his sense of honor, character, and reputation, to his sentiment of justice, to his friendship and sympathy, rather than to his selfishness, or his anger, by harsh words or rough treatment. He has Secretiveness rather largely developed, which gives him a desire to conceal that which he thinks it will not be well for him to express, and his Cautiousness is so large that he will sometimes evade the truth through fear of the consequences. Then his love of praise is very strong, and he sometimes will find himself in a position where he will conceal facts to avoid disgrace, or blame, or ridicule. Children often feel sensitive when blamed about subjects which involve disgrace or ridicule, and there is no appeal made to their sense of justice. The thing is not shown to be wrong in itself, only absurd, ridiculous, or out of character, so the child is reproached, instead of being instructed as to the right and wrong; whereas, if the censure were made through Conscientiousness, if the reproach came because the act was wrong in itself instead of being inconvenient to us, and ridiculous and disgraceful to him, it would have a good effect instead of a bad one. If we laugh at the child, and tell him how absurd and ridiculous his conduct has been, and set everybody laughing at him, the result is, he will resolve not to let it be known the next time. Perhaps he does not resolve not to do it, but not be caught at it. If the address were made to his conscience—if

the thing done were shown to be wrong in itself—then he would have something in him to reprove him when the proposition or suggestion to do wrong came up the next time.

"This boy can be made self-regulating, but he must be led and not driven; must be treated with courtesy and kindness, and not be reproved in the presence of others; should not be punished until he has had time to think the matter over, and get over the excitement, and not until the parent has ceased to be angry. Sometimes punishment in the way of whipping is not so useful as would be the quiet denial to the child of some favorite pastime or pleasure. If he were told on Monday that, because of some wrong-doing, he will be deprived of the privilege of going out Saturday, he would have time to get sorry before Saturday, and the whole of Saturday to repent; and if he receives nothing but kindness during the day, and is told that the parents are sorry he is not able to have a good time on his leisure day, he will make up his mind the way of the transgressor is hard, and that the next time he will behave himself; and one such treatment as that will last a child a life-time, at least in memory, and perhaps become a sample to treat his own children by, thirty years hence. A hard threshing then and there might satisfy parental indignation, and seem to satisfy justice, when, probably, the whipping would only make him reckless, and perhaps more disposed to do wrong the next time.

"Here we find indicated very strong affection, and it can be appealed to, especially by a mother; and here is strong Caution, and its monitions may be made to work in the right direction. Here is a strong love of praise, and it ought to be harnessed to the car of progress, at the right end of it, so that it will pull in the right direction. He has not enough Self-esteem; not quite enough of manly honor about him. He should be taught to respect himself,

and that certain things are disgraceful and unmanly; not that they are merely ridiculous, subject to the world's criticism.

"He has Benevolence enough to sympathize with those who come in contact with him, and especially those who are in trouble. If he found that his conduct worried and made his mother sad, he might be induced on that account to amend his course.

"He has a talent for making money, and can work successfully in the direction of trade and commerce. It might be better for him to go into a store than into the ruder forms of labor, because in a store he would learn to suppress some of his feelings and curb his temper, as he might not if he were master of a provoking team. He will have such a sense of the value of property, such a desire to please others and to be popular; will have such a tendency to be friendly and make everybody think well of him, that he will make a good salesman. He has driving energy enough to run a locomotive or a team of mules, but they would not be a means of grace to him. His intellect indicates practical talent, quickness of observation, memory, faculty for figures and for music, and a good memory for details and particulars. His Language is fairly developed. He is more sociable in his spirit than he is free in expression.

"If he can be well-educated, he would do well as a physician; or, if he can be educated commercially, he will do well in business. He might succeed well as a mechanic, especially in something like dentistry; he ought to be where he can use his Destructiveness in surgery or dentistry, or in some energetic occupation. If he were in a store, he would take as many steps as would be necessary. He would run up-stairs after something and be back in a moment. Instead of trying to palm off something that a customer did not quite want, he would say, 'I have some

up-stairs, I will bring them down.' He is industrious, spirited, ambitious, affectionate, thorough, impulsive, practical, and a good reader of character, and if educated, trained, and treated rightly, he will make a good man. But he will always have a little too much ginger in his composition, and ought to associate with those in the future who have not quite enough of that element."

THE FACULTY OF FORM.

THE LAW OF CONFIGURATION.

This second faculty of the intellect plays an important part in education. In spelling, writing, drawing, geography, mechanism, art, and in acquiring a knowledge of things, it is indispensable.

The organ of Form is located on each side of Individuality, and that organ is located just above the root of the nose. When the organ of Form is large, it has a tendency to push the eye-balls apart, showing distance between the eyes. When the organ is small, the eyes are nearer together, nestled down close to the nose, and the nose itself seems to be narrow. When large, the eyes appear to be not only separated, but pushed away from the root of the nose. The portrait of the distinguished artist, Darley, Fig. 20, is an excellent illustration of the large development of the organ.



FIG. 20. DARLEY—FORM LARGE.

The brain is composed of two hemispheres, and the dividing line begins at the root of the nose, running over to the back-head. Of course all the organs are double, each hemisphere of the brain containing a full set.

The nature of this faculty is to recognize that quality of matter expressed by the word SHAPE. Everything has some form, and it is exceedingly difficult to find two articles so nearly alike in form that the eye will not recognize the difference. In a turning-lathe two articles may be made perfectly round. Marbles, and articles cast in moulds, may be so nearly alike in form as to defy the detection of difference. If we appeal to nature we may hunt for a week in the forest and not find two leaves so nearly alike that we can not instantly distinguish them from each other. No two pebbles on the ocean's shore would seem to be identical in form. When two horses, or oxen, are found to be so nearly alike that any difference between them does not attract attention, we call them properly matched. Sometimes we see persons who are so much alike in face that we mistake the one for the other when they are separate, but when they are together we see the difference.

REMARKABLE CASE OF TWINS.

We have seen one pair of twins, however, who were so nearly alike in size, form, and features, that neither their own mother, nor any of the neighbors, could distinguish them. They were eighteen years of age, and I examined their heads in the city of Washington, in 1841. One was brought into the room and examined; when she retired the other come in, and I supposed it to be the same one returned; but the moment I laid my hand on the head, I found that Self-esteem, which is located at the crown, was smaller; while Cautiousness, located at the upper back corner of the head, was larger than in the one who had come in first. When the difference was thus recog-

nized, and those traits of character were pointed out, which were known by the family and all their acquaintances to be the only differences existing between them, Mary was invited back to the room, and we showed the mother and other friends the difference between Mary and Martha. Mary had more confidence and assurance, and less prudence or timidity, and always took the lead. By observing these traits or differences of manner and character, the neighbors identified them when they called; or, when in society they were introduced to people, Mary would respond first, would step forward as if she were by two years the older. When these differences in the shape of the heads were pointed out, they were so palpable that any person could distinguish them with the eyes shut; though in face, figure, movement, weight, and size the girls seemed exactly alike.

We offered to be blindfolded and repeat the experiment before the audience at our lecture that evening. The parents and the ladies were present and consented. The statement respecting the examination during the day having been made, and the father being present and corroborating it, a gallant gentleman in the audience moved that the facts be accepted without subjecting the ladies to the public ordeal, but the father instantly announced that any friends who would call at his house might have the facts verified under their own hands at any time.

THE DIFFERENCE IT MAKES.

The differences in the manifestations of two persons—the one having the organ of Form large and the faculty active, and the other being deficient—are many and marked. The man with the organ of Form large will remember countenances and the general configuration of a person—the shape of the man as a whole. If the outline of a person were to be projected upon a screen, we fancy that

three out of four people in a village would be able to call out the person by name, whose shadow was thus thrown on the screen, without having the face of the person brought into relief at all. If a cast in white plaster could be taken of all the horses and cows in a village, which are known to every inhabitant, or they were all painted one color, most of the people would recognize each one at once by the contour alone. It is said that shepherds in Eastern countries know the countenance of every sheep in their flock of thousands, and if one were gone, they would know the lost face, and would recognize it anywhere. Most people, who have a thousand other things to observe and to think about, would not thus become versed in the physiognomy of animals; but we appeal to any farmer, who has a stock of twenty head of cattle and twenty sheep, or to any stable-keeper who has twenty horses, if he does not know the face of every one as well as he knows the faces of his neighbors. The outline of the countenances, as well as the general build of the body, is a source of instant identity.

ANIMALS AND INSECTS KNOW EACH OTHER.

It is well-known that all the animals belonging to a herd, as well as all the bees in a hive, amounting to 50,000 or more in number, know each other, because if a stranger attempts to come among them to remain, he is driven away or killed. Policemen, especially those who excel as detectives, are particularly expert in remembering faces, and they will describe a suspected person so accurately that officers in other cities will know the man, though he may have tried to disguise himself, as soon as he leaves the boat or car, or if he chance to be met in a crowd months or years afterward.

This faculty has much to do with our knowledge and intelligence, and is applicable to our daily duties in a

thousand ways, and it is only when one is deficient in this respect that we fully realize its usefulness and importance.

Fruit-growers know the proper form of each kind of berry, or plum, pear, apple, or peach; and if a cast were taken in wax or plaster, he would not be deceived. Then the forms of the various stalks and leaves of crops are readily recognized. One kind of potato has a different shaped leaf and different complexion. One kind of wheat will have one form of leaf, and another kind will show a difference in the same respect, before the grain is ankle high. Peas, beans, oats, grains of every sort, show a different shaped berry. In fact Form is a quality of matter—a mark of difference and identity.

A person who is deficient in this faculty will be awkward in this respect; may anxiously study to see, and yet see no difference in the form of things, unless the contrast is very marked; will mark all his things so as not to be in doubt about their identity. He will mistake strangers for friends, and perhaps be introduced and dine with a man to-day, and to-morrow meet him and be totally unconscious that he has ever seen him before, and the stranger will perhaps take it as an affront. Such a man will mismatch cattle and horses; will fail in telling the difference between his own and other people's cattle, and be found driving home his neighbor's cattle, thinking that they are his own.

ARTISTS AND MECHANICS REQUIRE IT.

Many articles of merchandise and utility depend for their value upon the quality of Form, and he only who has the faculty well-developed is fit to deal in them. The mechanic and the artist need the faculty in strong development, in order to be able to design, draw, sketch, work by the eye, model, forge, and finish. A pattern-maker, or one who makes shoe-lasts, and other things which can not be made from a pattern, as something round, straight, or square

could be made, needs the faculty strong and active in order to work it out in harmony. Modelers, who take a lump of clay and shape it into the beautiful figure of the human face and form, work almost wholly by this faculty. Portrait-painters, engravers, blacksmiths, tailors, boot-makers, and dress-makers require this faculty in order to be successful. We found it very largely developed in a man at Cuyahoga Falls, Ohio, in 1850. Though he was brawny, broad-shouldered, and stood six feet high, and looked as if he were adapted to felling the forest, or struggling with the storms of the ocean, rather than performing lighter functions, we said: "Your faculties of Form and Size are so largely developed that if you were a tailor, as we suppose you are not, you could look at a man and take in his form and size, by the eye alone, so perfectly that you could cut a coat that would fit him like a glove without taking a single measure of the man." The remark caused some sensation in the little party of friends, and after the description was finished, we were informed that, only a week before, he laid a wager that he could do that very thing, and he did it to the satisfaction of umpires.

No man is fit to work at anything which requires varied shaping—such as wood-carving, wood-engraving, scroll-work, brass-finishing, or the finishing of hats or boots, or designing shawls and carpets—who has not an ample development of this faculty. Those who are skilled in free-hand drawing, or in penmanship, must be well-developed in this respect.

SCHOOL-WORK MAY DEVELOP FORM.

Teachers and parents should recognize the existence of this faculty, and aim, if possible, to understand how it is developed in their pupils and children; and when it is deficient, efforts should be made to train it into activity, so that it shall amount to something. Young girls may

cultivate it by embroidery, by crochet-work, by cutting garments and dressing dolls, by trimming hats, and making their own clothes. In the school-room, penmanship is one method of training and cultivating this faculty; and instead of setting a copy to be imitated, the teacher should go to the blackboard, and with his chalk draw the stem of the capital letter A, and show the pupil that it is the same form that constitutes the first stroke of the letters B, D, F, J, K, L, M, N, P, R, T. These should stand in a row, and the teacher should talk about it and show how it is done, and then add the second stroke of the letter A, and the two strokes that finish B; then show how, in making D, the closing part of the letter is similar to the letter O. Then of course F, I, and J, R, and L can be finished; and when the L is completed, let it be made into D, and it will make the eyes of the pupils shine to see what a slight change of form is required in the capital L to make the letter D of it. Then he may proceed to M, making the first stroke, and then the second stroke, of the letter A, giving the finishing stroke and making the letter M; and N is made like M by leaving off the leg or the last member of M, which last part of M indeed resembles the letter C. Then P is a part of the letter A, and a part of the letter B, the closing member of the letter B being omitted. R is made like P, with an addition of the last leg. If that last leg be turned around, it is B again instead of R. The T is like F lacking the centre tick.

HOW TO TEACH PENMANSHIP.

Let the first strokes or stems be made—a row of them clear across the blackboard—and let the teacher himself change them into the different letters. Then the whole work should be rubbed out, and let some pupil, who is able to lead off, see what he can do, and we doubt not it will excite interest and not a little amusement. When the

teacher is drawing such a stem, it is easy to speak of the different curves, and how the same scroll-part will answer for most of the letters that begin with this stem. Most people make execrable capitals, and the right training of pupils in penmanship is an important matter under the best teachers or professors of that art. Sometimes teachers of penmanship very properly take pains to explain the nature of these forms. They make caricatures, such as are often seen in common writing, showing the wrong form in comparison with the right form. For instance, it should be shown that the C and the last half of the letter H are identical; and that the first half of the letter H has the form of I, J, F, and T, and that the letter O is very much like the letter C.

Then the pupils should be taught in regard to the small letters, as to the forms they should adopt. The up-stroke of the small *b*, *l*, and *h* should contain the curve, and the moment the first part of the loop is made, then the pen should come straight down to the line, or near it. The same should be true of the *f*; the stem should be straight from the top curve to the bottom, and all the bending should be in the up-stroke. The stem of the *g* is usually curved a little. It comes, perhaps, from habit; but the pupil should be taught to make it straight till he is ready to make the loop, and so also of the *y*. The *y*'s and *g*'s generally look like lazy boys sitting on the small of their backs in chairs.

This faculty may be further cultivated in penmanship by explaining to the pupils in regard to the *o* part of the letters *a*, *d*, *g*, and *q*. He should make a row of them as nicely as possible, and then make one into *a*, another into *d*, another into *g*, and *q*. If this were done, the *o* part of letters would not be made irregularly—large at one end and small at the other, like an egg. Of course, in the training of pupils in penmanship, the faculty of Size should

be educated as well as that of Form in the mind, so that the letters in a given word shall not, as is too commonly the case, diminish down to a mere crooked line. If pupils could be trained in respect to this faculty, thoroughly, in the beginning of penmanship, they never would forget it. As a rule, penmanship, even among men of culture, is execrable. We remember three aged men whose handwriting at seventy and upward, would do honor to any engrossing clerk, viz. : William Cullen Bryant, Rev. John Pierpont, and William Lloyd Garrison. It was not cramped and stiff.

Penmanship ought to be so legible that it can be read by any one who understands the letters. It will be observed, by those accustomed to short-hand reporting, that those who have a good, long hand, write the best phonography. It is more easily read, by themselves and others, than is that which is written by those who write an irregular long-hand; and we advise no person to undertake to become a stenographer who has not a good development of the organ of Form, for it will be a long, up-hill journey for him to attain to anything like a good position with his scarcely legible short-hand and his scrawling long-hand.

MAP-DRAWING A GOOD EXERCISE.

Teachers will also avail themselves of the nature of this faculty, and find means to cultivate it, in map-drawing. We do not mean finished maps, but rough chalked maps on the blackboard. We would have pupils so trained in geography that they could take a stick and draw in the sand, and show a person any given State and its relation to other States, or the line of rivers in any given section of the country, or the relative position of towns, just as we would have pupils so trained as to understand grammar, and arithmetic, and mathematics, and definitions, so that they will not need a Webster's dictionary under one arm

and a treatise on mathematics under the other. The education should be in the head—the topics of the books should be transferred to the mind. Men learn to make barrels, boats, houses, according to an outline in the head or mind. The blacksmith carries in his mind the form of the thing he has to hammer into shape and proportion out of the heated iron. Some trades, carpentery for instance, permit the mapping out of the article on the timber ; then the workman cuts to the line, taking away what he does not need, and leaving the thing intact as it has been drawn. But the blacksmith and the modeler in clay are obliged to keep in the mind the form of the thing that is to be wrought out, and bring it to the required shape. Though the plastic clay and the rugged iron require different manipulation, they both require to be shaped to the requisite form, and the operator must have the artistic form of the object in his mind in order to reduce his material to the required proportions.

OBJECT-LESSONS.

Then object-lessons can be given, and little children will soon learn to catch at the figures or shapes presented, and if allowed to repeat the name expressing the cube, square, oblong, or triangle, they will use the name in conjunction with the form or idea of shape, and are educated thereby. It trains the faculty, and when they come to write, or read Greek, Latin, English, German, French, or Hebrew, or write short-hand; or to make carved work in furniture, or in any other realm of the artisan, the early teaching in object-lessons, and in drawing rough maps, and making chirographic characters, will help them in their future career.

The truth is, the training of the natural faculties is the very essence of all the education that is worth having. We learn the rules of arithmetic and mathematics, to be sure ; but we are not obliged to repeat them constantly as we

use them. We take the examples as they arise in life, and apply what we have trained our faculties to know on the subject.

Some persons engaged in art have such a vivid recollection of faces that they can draw the likeness from memory of any person they know. The great caricaturist, Thomas Nast, will stand before an audience all the evening and draw the faces and bodies of public characters in crayon, so that every person in the audience will recognize them. It is said that Napoleon knew the name and the face of every person in his army, requiring a great activity of the faculty of Form, even genius in this respect, to remember all the faces; and then equal genius, in the faculty of Language and Individuality and perhaps Tune, to remember the names.

Committing to memory facts in regard to form, the course and direction of rivers, or the shapes of faces, or different members of faces, is not education. When we follow the river, or view the mountain, and take in its shape and magnitude; when we study the form of a State as it is spread out on the map; when we look at a face and learn to know it, we need no words to utter "aquiline nose; celestial nose; broad, straight mouth; finely-curved lips; dimpled cheek; square, rugged chin." These are facts which are presented to the eye, and by the active energies of the faculties of Form and Size the mind gets the correct impressions, and the inner man is educated by the training of the faculties. If teachers will take into consideration the primitive faculties which they are cultivating, training, and exercising, with a consciousness of what they are about, it will be seen that they, in teaching penmanship, teach also the elements which enter into geography, the study of languages or mechanism, and a thousand phases of daily life, and which, being trained to activity, make men intelligent, easy, and graceful.

THE LAW OF MAGNITUDE.

FACULTY OF SIZE.

SIZE, or extension, is a condition or quality of things. Everything that we can imagine, which is tangible, occupies space, has bulk, magnitude, and extension. This differs from the quality of form, for things may be of the same form, yet of very different size. Take a ball, or a circle, which is uniform, or anything having irregular form, it may be magnified a thousand diameters and yet retain precisely the same form. We photograph the human face. Sometimes it is as large as a silver dollar, sometimes half as large, sometimes a fifth part as large, yet the precise form is retained. The smallest shot, and the largest cannon-ball, are identical in form, and the faculty of Form, in respect to them, is thoroughly satisfied; and it is only by means of the faculty of Size that we are enabled to judge of the difference between them, and this is done if the size be varied in the least degree. When we look into a tailor's window and see the elegant figures, representing fashion-plates, it does not strike us that they are too small. The form is satisfactory, and that is what we look at. When we look at a statue that is above the ordinary size, as long as the form and proportions are satisfactory we accept it as correct. Yet if we exercise the faculty of Size in respect to these objects, we recognize the truth of the matter without inconvenience.

The organ of Size is indicated by massiveness of brow outward from the root of the nose. See Fig. 3, p. 25.

USEFUL TO MECHANICS AND ARTISTS.

This faculty is useful in every grade of mechanism and in every form of art. The turner of wood, having his pattern before him, after awhile becomes accustomed to the size and form of the parts of the article which he is turning. Suppose it be a chair-round, or a balluster for a stair-case,

the form of every part, and the size of each part of it, become so impressed upon his memory that he may remove the pattern and work day after day, perhaps turning a thousand pieces, and they will be so nearly alike that they may be put into the ballustrade, or into the set of chairs, and the observer will not detect any difference in the form or size of the different members.

The blacksmith must have the faculty of Form to give the requisite shape to his work, but he must also have the faculty of Size strong and active in order to give it the requisite size. A shoe for the foot of a great dray-horse is one thing, and a shoe for a pony, though in form like the other, is decidedly a different thing, being not more than half as large. A skillful blacksmith will work all day making horseshoe-nails or rivets, and he will measure the size of each by the eye so accurately that half a dozen which he makes in the morning compared with half a dozen that he makes in the evening—the first and last of his day's work—if they are placed on scales will be almost identical as to weight, and consequently in size.

Men who are accustomed to judge of cloth will detect the difference in thickness where it is very slight indeed. The same is true with paper-dealers and paper-makers. A man who attends a paper-machine, where the paper comes rolling off at the rate of fifty feet a minute, will gently take hold of it with the fingers, as it is passing, and detect the extra thickness or thinness, and rectify it, where that difference will not amount to more than half a pound in the ream, containing 480 sheets. It would be detecting a difference of 120th of one 480th part of a pound; and when this difference in the thickness of the sheet is understood, the fraction is found to be an exceedingly small one. Yet the judgment of the paper-maker is absolute and instantaneous in the matter. That may be called a cultivated condition of the organ of Size.

Wool-sorters will understand it when we say that they can take a lot of wool and assort it into sixteen different qualities, grading it according to the coarseness, or *size*, of the fibre; so that if a handful of wool were taken from each of the seventh and ninth qualities, for instance, the sorter would instantly recognize, by handling them, where each belonged. We have seen wagers won, in half a dozen instances, by wool-sorters, who would return each handful to its proper department, though there might be two or three qualities between the specimens judged of.

In many trades work is done by the eye as to form and size. We have instanced the turner and the blacksmith. The modeler, also, the pattern-maker, and even the artist, are obliged to estimate size as well as form without opportunity for measurement. The stone-cutter, the sculptor, the man who works at irregular forms in wood, must carry the size as well as the form of the article in the mind. In the work of the kitchen, also, the strength or the weakness of this faculty will often be seen. When one biscuit is a third larger than another, and one slice of bread twice as thick as another, or thick on one side and thin at the other; when the table is set with the plates at irregular distances, and everything is too much huddled or scattered; when the library books are adjusted so that the little and the large are mixed together, we may know that the administrator of such affairs is poorly developed in the organ of Size.

Persons who follow needle-work, if this faculty be well-developed, will have all the foldings, plaits, and parts of trimming harmonious as to distance, size, and proportion. If the faculty be weak, there will be irregularities that will be noticeable. A person who works at any trade, or artistic occupation, which requires working by the eye, should have the faculties of Form and Size so developed as to be able to do the work in such a manner as not to awaken

the criticism of the observer. Some work is done with sufficient accuracy for all practical purposes, which, if carefully measured, would evince some difference in size and form; but he who can work so closely by the eye that others, who are good judges, will not detect the difference, his accuracy is quite sufficient. We often detect error in distance between the pictures in a room. Those who are deficient in this faculty should always adjust by measure, so as not to offend the taste of those who have good judgment in this respect.

INTUITIVE JUDGMENT.

There is ch of the business of life which has to be done in an off-hand way. Important transactions are often made where weighing and measuring are out of the question. For instance, a man can not measure the contents of a tree to determine its height, or its size at the height of fifty feet, or how much timber it will make, and how much he can afford to pay for it. If he were dependent upon absolute measurement it would require a good deal of expensive apparatus and time; but men who are accustomed to buy timber will look at a forest tree, which perhaps will measure seventy feet to the limbs, and will take it in by the eye, the magnitude of it, and the amount of planks, boards, or timber which it will make, and do it almost instantaneously; and so he will go from tree to tree until he has estimated several acres of timber, or many scattered trees, here and there, over the whole forest; and he will buy them standing, and his estimate will be almost as nearly right as an accurate measurement would give it if the trees were lying on the ground.

CATTLE-BUYERS.

Men who buy cattle for the slaughter are obliged to judge of the weight by size. They learn by carefully walk-

ing around an ox and scanning his size, then driving him on the scales and weighing him, and in this manner they soon become experts in judging of the weight. We had a stranger under our hands, and noticing the enormous development of the faculty of Size, also of Form, Individuality, and Weight, we told him that, if he were accustomed to buy cattle, he would go, with memorandum-book in hand, through a drove of oxen consisting of a hundred, which would weigh from 900 to 1,600 pounds, and in less than a hundred minutes he would record the weight of each, so that it would not vary, on an average, ten pounds when the oxen were brought to the scales. He burst out laughing, and said: "I can do better than that; it is my business. I bought 107 oxen a short time ago, in one drove, and they varied from my hasty estimate only 450 pounds in the total weight." We asked him if the weight was more than he estimated it, or less, and he replied, with a smile, "Oh, it was more, of *course*." That term "of course" appeared to us impudent. The idea of a man's estimating the weight so closely, and yet feel so confident that, if his estimate varied from the true weight it would be four pounds on each ox more than he had estimated it, seemed impossible.

The reader will thus see how important the faculty of Size is to many men whose business does not require them to take the artist's or mechanic's tools in hand. The lumber trade is a large business; cattle-buying is an important branch of industry; and he who has not the proper faculties for estimating cattle on the hoof, will utterly fail of success. He will estimate the weight of cattle so low that no owner will sell to him; or he will be willing to call the weight more than he can afford to pay, and thus ruin himself.

The engineer needs to have this faculty well-developed —in fact, all the perceptives. A man who is accustomed

to engineering, especially laying out railroads, will first go over the ground without instruments, bending through valleys and over hill-sides, making what would be called a walking survey, and sticking stakes as a general guide to the surveyors; and we have conversed with some engineers who said they could lay out a railroad by the eye up and around mountain-sides, in such a way as hardly to vary six feet in the mile from the proper grade, and this is done mainly by the faculty of Size, in connection with Weight and Form, which estimate the variation in grade.

Butchers, who cut up meat, learn to know the weight by the size of the piece they cut from and the thickness, so that they will cut within an ounce of what they wish to. But we have noticed that if we ask for two pounds, they give two and a half; if we ask for two and a half pounds, they give three, which shows that they know the weight exactly. Therefore if we want two and a half pounds, we ask for two, and when we want three, we ask for two and a half. Thus they not only prove that they are excellent judges in the matter of weight by size, but that they have an eye to profit, bringing in the faculty of Acquisitiveness as well as that of Size.

The portrait-painter requires the faculty of Size quite as much as that of Form. For instance, in drawing a face one may get the general form of the head and face correctly, but in putting the features in, the nose may be made considerably too large or too small. Though perfect in form, it is too large or too small for the face. The mouth may be too large or too small, yet perfect in form, and the same may be true of the eye. Now if the nose be a third too large or too small, but precise in its shape, the faculty of Form does not tell the portrait-painter that, for if the shape be right the faculty of Form is satisfied. If the faculty of Size were small and the organ weak, the artist would not detect the fact that he was making a

caricature; but if the faculty of Size were active and well-developed, he would have the requisite proportions between all the members of the face.

CARICATURE.

The caricaturist must have a fine sense of Form and Size to estimate the true size and form, so as to know when the portrait leaves the boundaries of the congruous and enters the domain of caricature—since a caricature consists largely in exaggerating the peculiarities. If a man is known to have a small nose, or a small chin, the caricaturist needs only to make it smaller and he has a caricature. If a man is endowed with a large nose, or a large mouth, or a large ear, the caricaturist increases the size of the nose, or the mouth, or the ear, keeping the form intact. So if a man is known to have very long and thin legs and large feet, the legs need to be made a little smaller and a little longer, and the feet larger, and the result is a caricature. The faculty of Size is chiefly the one by which caricaturing is recognized, as well as the one through which the artist knows how to make the caricature. Perversion of form is also a source of caricature, but such results are more often produced by irregularities of size and their queer juxtaposition. Sometimes a small man is represented riding a very high horse; and one of the richest of caricatures is a very tall, long-legged man mounted on a donkey, requiring the rider to bend his legs a little to keep his feet off the ground. Now there is perhaps nothing ridiculous in the donkey alone, or in the man alone; but when they are combined, the contrast of size is such as to make it superlatively ridiculous. There is, therefore, a deal of fun and mirth wrapped up in the work of the faculty of Size. It occupies, to be sure, but a small space in the brain, and so does the pupil of the eye occupy a small place as to space, but it does a world of work. So the faculty of Size becomes a window for that of Mirthfulness.

CAN THE TEACHER UTILIZE IT?

Whether the teacher can at once see how he may make use of the faculty of Size in himself, or in his pupils, so as to promote their culture and education or not, true it is that this faculty exercises a wonderful influence in the minds of pupils in many ways. In penmanship, for instance, a person who has the organ large is likely to keep the size of his writing the same from beginning to end of a word or line. Some writers start largely each word, and make one or two letters uniformly, and then begin to taper down, and if the word ends with *m*, there is a slightly crooked mark for the first part of it, and the last two members are degenerated into a straight line. In teaching penmanship, therefore, we would recommend that a special point be made to call the faculty of Size into use, so that the sizes of the lines may harmonize and the different letters be equal. If a page of writing shows uniformity as to size and shape, though it may not be elegant, it looks and passes well. A teacher may, profitably to his pupils, take his crayon to the blackboard and write awhile, making first the letters of a word or line large, and then gradually tapering down to a little, crooked line, and thus make a caricature of it for the pupils. Then he may make the first letter of a word of a given size, and the next letter smaller, and the next two letters of irregular size, but larger, and so all the way through. This will produce a salutary and memorable effect on the school.

One has not to receive very many letters, from different people, to see all the caricatures that can be made in the realm of chirography—large and little letters jumbled together, some leaning as if they were running a race—*h*'s particularly seem weak in the joints, and their backs lean in sympathy, and *k*'s and *l*'s standing up, as if they were liable to fall backwards; and when these irregularities occur in the same words, one need not go to *Punch* to

have something to laugh at. Every effort a pupil shall make in respect to equality of magnitude, under the dominion of Size, in penmanship or in anything else, is a good culture of that faculty, and until that fact is insisted on in the teaching of penmanship, the faculty is not likely to receive training and culture from the process. But it should be shown up, talked about, ridiculed by exaggerations, and that will induce pupils to think, "I must make my letters of equal size, of proper size, or a given size, as well as of proper form." One may make his letters of correct form, but they sometimes look like horses and colts, sheep and lambs, cows and calves, all in a row, shaped rightly, but ridiculous as to relative size.

The faculty is cultivated in the study of geography, in respect to distances. In map-drawing Form and Size, combined with Locality, give skill to the pupil in whatever relates to their use, as well as to the man of business, mechanic, or artist in full practice. This faculty also is rendered active in respect to things tangible, and may also be made very serviceable in the study of mathematics, which is the science of quantity, since extension is one of the elements of quantity, and number is another; but this will be set forth when we discuss the subject of mathematics and the faculty of Number.

THE FACULTY OF WEIGHT.

ITS NATURE AND USES.

WEIGHT, or ponderability, is an intrinsic quality of matter. Things weigh more or less according to the amount of matter which they contain. The faculty of Weight recognizes this law of gravitation. Bodies are attracted towards the earth, and the earth itself is attracted towards

other bodies, in proportion to the size, weight, and distance of those bodies. Man and animals are adapted to this law of gravitation by means of the faculty of Weight. It gives the power to balance, or the sense of equilibrium. Those in whom it is strong, obey the law of gravitation in respect to themselves with more ease, accuracy, and grace than others. Some men walk as if they were on springs, and their motions are easy, harmonious, and graceful. Others walk with a lurching, swinging, lounging motion, as if it were hard work to regain at each step the equilibrium.

The process of walking, simple as it appears, is rather complex. Imagine a man standing, harmoniously balanced He desires to walk; he lifts one foot, and by a muscular effort, or by the weight of the lifted limb, his body is caused to lean forward, and inclines to lose its balance. He restores the balance by putting out the lifted foot, and shifting his weight to that foot, and repeats the process. Now, in order to be graceful, when he lifts one foot he must maintain the equilibrium of body, by a slight effort of muscle, until he gets the other foot down. In this way he can walk so as to keep his body and head moving in a direct line. But if, when he lifts one foot, he surges over the other way to balance the lifted limb, when that foot comes down he has to lean the other way to balance the other lifted leg, and thus his head swings from side to side, and his brawny shoulders lurch hither and thither like a vessel in a rough sea, and the whole process of walking to him is laborious and anything but graceful.

INTUITIVE OBEDIENCE TO GRAVITY.

If one will observe horses, he will find the same difference in their movements which are seen in different men One horse will trot like a fox, and his movements will be easy and smooth, and therefore he will be a good saddle

horse. He will roll off the miles and not wet a hair with perspiration, while another horse, trotting by his side, or separately, going at the same gait, will foam and froth, and be dripping with perspiration. He may really be stronger, pull a heavier load, and be able to go as fast as the other, but he does not move as easily, because he does not balance himself. Observe a horse, as he rapidly turns a corner, how he throws the weight of his body inward, and the driver, sitting on the seat, leans inward to keep himself from losing his balance and being thrown from his seat by the centrifugal force. Watch a circus-horse as he goes around the ring—the track or the path being made at an angle of twenty degrees' inclination for the bracing of the feet of the horse; he leans inward perhaps twenty degrees, as his rider also does, to keep their equilibrium. In this way the law of gravitation and the centrifugal force harmonize or balance each other; and it takes a strong development and a nice adjustment of the faculty of Weight to make a good circus-rider.

THE ARTIST AND BLONDIN.

We once employed an artist to draw some portraits, illustrating the development of the different organs. We placed the photograph of a noted man before him without thinking to give the name, and when the artist came to that part of the brow which indicates the organ of Weight, just above the inner edge of the eye-ball, he said: "You do not want that caricature—that bat's-wing appearance put in?" In fact the organ of Weight was so developed that it looked like the uplifted wings of a bat across the inner angle of the eyebrow, like a brace in carpentry, filling that portion; and we replied that the part he wanted to leave out was precisely what we wanted of the picture—that it was what we were painting it for. And when he asked to know who it was, and we told him it was Blondin

the great rope-walker, he opened his eyes, and was satisfied to paint the picture as it had been taken by the sun's rays, in photography, from the man's own face.

USEFUL TO MECHANICS.

Workmen who have this faculty well-developed understand the force of the blows they are required to give to accomplish certain ends. For instance, in the familiar process of cracking walnuts—and our young friends understand something about that—we give one light blow to see that the nut is not going to slip, and then with one sharp blow the work is accomplished, and a person who knows how, will crack fifty walnuts in succession, with one tap to regulate it, and one blow to do the work; and if it happens that the blow he supposes to be sufficient does not do the work, he is astonished. Another person who may have cracked just as many walnuts, but who is deficient in the organ of Weight, will strike three or four blows, increasing every time in force, and by and by crush the walnut and make it fly all over the house, and perhaps bruise his thumb or finger.

If we were lecturing to an audience of mechanics, we would give illustrations, in several departments, that they would understand instantly. We have seen a carpenter who would drive his nail nearly home, and continue to give heavy blows until his hammer mashed and marred the wood. We have seen a chopper smite a small stick and drive the axe into the ground; whereas, if he had given a light blow, it would have been sufficient. Some people are always breaking, marring, and bruising everything with which they have to do; and when they are walking about the house, there is no spring to the walk, but a heavy trudge. They will slam doors, and it is rattle-bang from morning till night. Clerks in stores show the same rude, unregulated use of force; and if they happen to get into a

crockery store, they break more than they earn. Prize runners and walkers avoid tiring themselves, or wasting their strength, by assuming a well-balanced method of motion. They waste no strength by swinging the arms, or in rolling the body from side to side. They obey the law of gravitation through the action of the faculty of Weight, and thus win the prize against those who walk heavily and surge from side to side.

SEAMEN AND SEA-SICKNESS.

The seaman requires a good development of this faculty, because he has to climb and maintain his balance in lofty and difficult positions. He who has this consciousness of power to balance, can climb without feeling frightened or giddy. People who have the organ of Weight deficiently developed get sea-sick. Those who are able to keep their balance nicely, and adjust themselves to the rolling motion of the ship, so as to keep the brain from swinging this way and that, will go across the Atlantic without getting sea-sick; but those that swing with the ship, and bring up with a lurch, and do not know how to adapt themselves to the motion—or, in other words, keep their balance—get sick. Some men riding horseback, churn, churn, churn, at every step of the horse, tiring the man and wearying the horse. They do not seem to know how to ease their own weight by a gentle pressure upon the stirrup, and a slight muscular effort in harmony with the motion of the horse. When a person goes pushing through a crowd, and jostling everybody, it does not necessarily arise from rudeness and carelessness of disposition. It may be a lack of power to balance. Witness persons dancing who have a good development of the faculty of Weight. All the motions are easy, and they swing and sweep in harmony with the music, and with those that are moving with them, and their motions would indicate that they were light as gossamer

though they might belong to the "heavy-weights;" while another person, weighing 130 pounds, will seem to jar the house, jostle others, rudely hitting them as he passes, the blows received from his shoulders being exceedingly heavy and very uncomfortable to bear. When one takes the hand of such a person in the dance, it is not a light, easy, self-poised hand, but a drag for the time being on the one who holds it. We have seen men, who weighed 250 pounds, whose motions on the floor did not seem to jar the house; nor did they bear so heavily on the hand as some who weighed half as much, and who in walking would step on the heel and let the whole weight come crushing down without any effort at adjustment or modification.

WEIGHT AS RELATED TO ECONOMY AND GRACEFULNESS.

It will therefore be seen that the faculty of Weight is useful in a thousand ways with respect to safety, in regard to ease of motion, correctness of effort in mechanics, and in an economic sense relating to breakage and damage, and also as a means of ease and grace of motion in society. It is a great aid to what is called culture and good manners. A man may have all the classics, all the ethics and mathematics in his head, but if his muscles do not obey the law of gravitation, he walks like a wooden man among men—jostling, jerking, and offending anybody that is in his way. Pope says: "Those move easiest who have learned to dance;" and people are more likely to dance if they have enough of the faculty of Weight so that each motion is done with facility and agreeableness to others; but one who can not turn a corner without tumbling down, who can not make a curve without awkward effort, is not very likely to move well in the mazy dance. He feels that he is going to run against everybody, and everybody gets the same idea. Such persons are not sought, except through courtesy, as companions in the dance; and the lack of this

faculty may make persons of great talent and excellent worth neglected in the drawing-room, because when they move they do so at the danger of everybody's toes, and there comes to be a feeling of repugnance, and dread, and fear respecting them.

AN AID IN TEACHING.

The teacher can do much to cultivate grace of action in the pupils in school, in respect to the walk and the motions. If there be marching, if there be elocution, there will be a good opportunity for monitions—for instructions on the subject. Boys in school should not be permitted to stroll and stamp about the room with their heavy boots, as if the boots had a cast-iron man in them, or a wooden boy—a person without soul or ambition. They should be kindly asked to try that over again, and some boy, who knows how to walk with grace and ease of motion, should be asked to set an example; and though it might mortify the boy who was thus criticised, it would cure him of a habit that would mortify him ten times worse by and by. At any rate, it will be an admonition to every person in the school. If the teacher will watch, he will see that it will be taking effect with the next boy or girl that walks across the room. There will be an effort, in accordance with instructions, to do it with grace and propriety, suited to the place and the occasion.

In penmanship the slope of the letters will be regulated largely by the faculty of Weight, and if the law of form requires that a given slope shall be made in the letters, and they are sloped because that is supposed to be the easiest way to make them, the faculty of Weight will help appreciate the variation from the vertical required by the letters. If one letter leans like the tower of Pisa, and another stand perpendicular like a church spire, another like the raking slope of a ship's mast, and these all occur in a given line

or word, the faculty of Weight is offended; but let them all lean in one direction, as grain pressed by a breeze leans in one direction, then the faculty of Weight is satisfied.

If we look at the picture of an officer standing by his horse, with his elbow on the pummel of the saddle, and of course leaning towards the horse, we are satisfied with the attitude of the man, because we see what he leans on; but if we cover up the horse and the elbow of the officer, and his body is seen to lean without any visible means of support, it offends the faculty of Weight, which perceives the error and gives us pain.

How we judge of horizontal or level.

We judge of level by the action of two faculties—namely, Weight and Form. Weight gives us an imaginary, perpendicular line. Our own center of gravity is expressed by that which is vertical, when we have anything to express it by; and when we have nothing to express that line, we carry it in imagination, and we may look at something that we may wish to estimate as to whether it be level or declining, and we stand erect—for it would be difficult to judge of it while reclining—and compare that which is horizontal, or nearly so, with the perpendicular line we have in the mind, and then the faculty of Form tells us whether they constitute a right-angle. When we look at picture-frames hanging, we have the side of the frame to aid us; but if the frame be irregular and scalloped, and it has no straight line, then we take the whole mass into view, and as we may say, draw a line through its center, and see whether that perpendicular line which is suggested by the faculty of Weight shows on each side of it an equality of bulk. Sometimes people think they judge of the plumb and the level of things by comparing them with something else; but if one stands on a side-hill where there is nothing within the whole range of his vision

that is perpendicular, if he has a straight pole he can set that in the ground and walk around and consider, without any regard to the ground it stands on, or the sloping hills in the distance, whether it corresponds to his internal sense of the perpendicular, and he will plant it so that he shall be almost accurate in reference to its vertical position, and do it solely by the faculty of Weight. Now if, when that is planted, one wants to see whether the ground is level, he can, with his faculty of Form, estimate the angles which the surface of the ground forms with the line of the pole he has erected.

The discussion of the faculty seems dry, perhaps, because people have not been accustomed to think in that direction; but if the faculty of Weight were to be disturbed, it would seem to throw everything into confusion. The man who takes much intoxicating liquor seems to have the faculty of Weight disturbed more than anything else. He complains of the width of the road much more than he does of its length. Nothing is more confusing to a person than to have that swimming of the head, or giddiness, which disturbs the balance, whether it arise from a rush of blood to the head, or from some other cause.

The faculty of Weight, then, blends with all our motions, and it is a factor in all that we do. If it be weak, it may be cultivated by the training which will keep it active. It is sometimes so active in persons that many things annoy them, because the law of gravity is disturbed. A crooked stone fence, that looks as if it were toppling to its fall, would make such a man very unhappy, and he would be inclined to overhaul such walls—to brace and straighten up fences and gate-posts. A child that has the faculty well-developed will learn to walk early, and one that is weak in it will tumble down often, and will rarely attempt to climb, and be unsuccessful in any such attempts; while others will climb like monkeys, never fall, balance any-

where, learn to ride, and the more fiery and spirited the horse the better they like it.

THE FACULTY OF LOCALITY.

STUDY OF GEOGRAPHY.

THE science of geography depends chiefly upon the faculty of Locality, or, it might be properly called, local memory. Numerous considerations show this to be a special faculty, and that its strength and activity bear no special relation to the vigor of the general intellect. In the lower animals it seems to be an intuitive instinct, not dependent upon the general intelligence of the animal.

Dr. Gall, when a boy, was very fond of the study of natural history. He liked to take young animals and raise them as pets. He hunted for birds'-nests, and watched the development of the nestlings; and when he went into the forest to find nests, or to set snares for birds, or traps for animals, he unfortunately was not able to find them again. Not willing to give up his researches, yet unable to return to the nests, or to find the snares and traps which he had set, or to return to his home readily, he was obliged to take one of his playmates with him, who cared but little for birds or their nests, yet he easily remembered the location of every nest and trap; and though young Gall was the master of the enterprise, his playmate was the pilot. This method was adopted from necessity, but it made an impression upon Gall's mind which, in after years, laid the foundation of the discovery and the philosophy of this organ. His associate remembered the location of the nests, but cared nothing for natural history; while Gall, eager in reference to the subject-matter of inquiry, was unable, though anxious to do so, to find his way to the nests he had before discovered, or back to his

home again. Gall laeked the faculty for geography—his associate possessed it in a high degree. Subsequent investigations led to the location of the organ in a partieular portion of the brain, and the applieation of the name it bears.

Its Location and Rationale.

The organ of Loeality is situated in eaeh hemisphere of the brain, about an ineh outward from the middle line, half-way from the brow to the top of the forehead, and when it is large it gives fullness to that region of the head. It is very large in the portrait of Capt. Cook, the great explorer. The nature of the faculty is adapted to the fact that no two things ean occupy the same space at the same time, eonsequently everything must be located in respeet to every other thing—above, below, or laterally. And since man occupies a place, everything else, as it respeets him, must occupy some other place; and the faculty for remembering plaees—Loeality—gives him the idea of relative direetion or position.



Fig. 21.—Captain Cook. The Great Explorer.

Those in whom this faculty is well-developed and active, remember not only the cardinal points—North, South, East, and West—but *all* the points of the compass, and are able to reeall them, and feel an ever-present knowledge of them. Those in whom the faculty is poorly developed have little idea of the direction of anything from themselves, and have to manage in an artificial manner to keep in mind their own loeation. Instead of knowing that a plaee is east of them, they know they have to turn to the right to go to it, and to the left in returning home; and if they were to forget this idea of right and left, the idea of intrinsie loca tion would give them no clew to the place.

ANIMAL INSTINCTS IN LOCALITY.

Certain animals have this faculty in great perfection. A horse will find the way when his master is lost. It is a well-known fact that horses which are used by persons who carry the mail and distribute newspapers along the road for many miles, and that the horses of milkmen and physicians in cities, learn the several stopping-places; and when a customer is lost for the newspaper, or for the milk, or when a patient has recovered, so that the daily visits are suspended, it requires some time to train the horse to go by without trying to stop. We have often seen a horse that would go through a whole street, twisting about from house to house, and across the street, with a milk-wagon. While the man was serving one customer, the horse would go on to the next, if it were near, and when the last house on one side of the street had been reached, the horse would turn himself around and stop at the next place, on the other side, on the way back. This instinct in the horse, which adapts him to his natural state, is brought into use, in the service of his master, in these and many other ways. A horse being sold and taken 200 miles, and having been again sold, and resold, has been known to stray away from his owner and work his way back to his original home, or the home he liked best. It is known that dogs can be removed from on shipboard to strange countries, and when placed on the track of their game will follow it all day, over hills and mountains, through ravines, forests, and jungles; and when the game is taken, or the chase abandoned, they seem to know the way to the place where they had their breakfast, and will start instantly, in a direct line, for their temporary home. In every farming neighborhood it is understood that if a pig two months old be carried miles from his home in a wagon, in an open barrel, which offers him only a patch of sky to look at, he will get out of his enclosure, if possible, and go straight home—even swim

ming rivers—paying no attention to roads, but wallowing through the tall grass, cornfields, or forests, until he finds his native place.

Everybody knows that carrier-pigeons have been used for centuries to send army dispatches home over the heads of hostile foes. In the late war between France and Germany, the beleaguered city of Paris was kept in communication with the army at Lyons by means of carrier-pigeons. Before communication had been cut off by the besieging army, some Paris pigeons had been taken to Lyons, and pigeons from Lyons having been taken to Paris, and kept for the purpose, messages could thus be sent by the pigeons both ways, keeping the government and the army in intimate correspondence.

THE BEE-LINE.

It is also well-known that bees fly in a straight line when they have loaded themselves with honey. Hence a straight line is called a "bee-line." Having thus been wandering from flower to flower, in a thousand circuits, until loaded, it takes a sweep in a circle, say ten yards in diameter, as if to collect itself, then darts off in a direct line for its hive; and it will come back again into the same vicinity, if the place be a desirable one, to reload with honey. Bee-hunters, taking advantage of this fact, put their honey-box or trap where it will attract the bees as they are flying back and forth. Finding it easier to load themselves from the honey than from the flowers, the bees light upon the bait; and when they start for the hive, or tree where they live, the straight line which they take indicates to the hunter the direction of the tree, and thus by following in that line, with the box of honey, a short distance at a time, and depositing it before the bees return, the hunter gets after awhile near enough to the bee-tree to trace the

bee direct from the bait to its home, when the bees are treacherously robbed of their treasure of honey.

The faculty of Locality in the bird, the bee, the pig, the horse, and the dog, is the foundation for these wonderful results. If, then, bees have this instinct of place; if animals, large and small, manifest the same trait; if birds that go South in the winter remember and come back to the same place they occupied the summer before, it shows that there is an instinct or faculty for remembering place and direction. It is a doctrine of phrenology that whatever faculty can be found in any of the lower animals, a corresponding faculty will be found in the human race. Man himself, in respect to faculty, is all that can be found in all the beings below him, besides having that which animals lack—namely, the higher reason and the moral sentiments.

ROAMING FOR THE RESTLESS LOVE OF IT.

Those in whom this organ is large and the faculty active, have an insatiable thirst for traveling, and many thus become rovers, going around and around the world; and there is nothing of which they feel so pleased and proud as to say they have been in every country on the globe, and also in every large city. We know a man who made a special journey to visit a county in his native State, within the confines of which he had never been, for he felt ashamed to say that there was a county in his State that he had never visited. We often hear people say: "What does he know? He has never traveled!" Another says: "I am posted. I have seen the world. I have been all over!" as if having traveled hither and thither was a great acquisition and a high culture. It is one form of culture, and a good one. He who has never left his native home—more especially if he has no particular disposition to study geography, and thus travel, in imagination, by using the maps

and charts of the world, having never seen anything but his own neighborhood—has, in one respect, a very narrow mind. Some men have little desire to go to see any place which is not visible from their own door-step. They go to church, to the store, to the post-office, blacksmith-shop, and grist-mill, and seem to have no interest to go beyond. We saw a man who lived all his life within seven miles of Niagara Falls—indeed within hearing of its roar—and he had never visited it, though he was a man of sense and of property. A gentleman told us that his father, who resided within forty miles of New York until he was seventy years of age, and had secured an ample competency in business as a farmer, being worth many thousands of dollars, yet he had never been to New York. The faculty of Locality must have been very dormant within him.

WILLING TO SUFFER TO SEE THE WORLD.

We remember to have examined a man who was born at the head-waters of the St. Lawrence, on Lake Ontario, who had such a thirst for seeing distant places that he broke away from all restraint, at seventeen, and engaged in lake navigation, from the simple desire to see Niagara Falls, Buffalo, Detroit, Chicago, etc., because he had not the means to make such a journey except by working his way, and he remarked with a kind of exultant feeling: "I have enlisted in the army as a private soldier, though I leave a good farm, and a loving wife and family at home; but I so desire to see Baltimore, Washington, New Orleans, and other large cities which, as a soldier, I may have the opportunity to visit, that I take the risks. If I live to return, I intend to cross the ocean as a sailor, that I may see portions of the Old World." This man, we noticed, had the organ of Locality enormously developed; and having dwelt at length upon it, he gave us this scrap of his history in confirmation of our description of him. Such

persons leave home with pleasure; and though they have ties which unite them to their friends and home, their master-passion leads them to forget every inconvenience and privation which leaving home, and being among strangers, is calculated to produce. If Humboldt, Sir John Franklin, Bayard Taylor, Dr. Kane, Dr. Hayes, and others, had been less endowed with this faculty, the world would never have read of their wanderings, and the knowledge acquired by it, with such intense interest. To go somewhere, and to see something, is a very strong trait with such men, and the world is very greatly indebted to them for the explorations which have grown out of the activity of this faculty. The bust of Capt. Cook, the great navigator, and all his portraits, show an immense development of this organ. See fig. 21, p. 150.

CHESS, CHECKER, AND BILLIARD-PLAYERS.

This faculty aids the player of checkers and chess, and no man can play billiards with success without its activity, and also that of Size, Weight, and Form. Locality gives the idea of direction; Weight gives a sense of the proper force to drive the ball with the requisite momentum, so that, hitting another ball, the resistance shall be just sufficient to produce the proper angle or direction to hit a third ball, with the proper force and right direction, to send it to its pocket. Billiard-players will understand this explanation of the use of the faculty of Locality.

It is known that some great chess-players can play many games blindfolded, and keep the real and relative position of all the men on the chess-board, on as many as six or eight boards at the same time, while every move on the several boards changes the relation of the pieces, and the memory of the location of all these must be held in the mind. We think it is a very severe tax on the mind, and one that would hardly pay for the strain; and we are not

surprised to learn that one of the greatest chess-players of the world was recently compelled to make his retreat in an asylum for the insane.

USES OF LOCALITY IN GEOGRAPHY.

The reader will now be prepared to understand some of the uses of the faculty of Locality in the study and teaching of geography. Suppose the teacher is in Boston, New York, Philadelphia, Baltimore, Richmond, New Orleans, St. Louis, Chicago, or San Francisco. His pupils, of course, wherever located, must obtain an idea of the places they are to study about, which, in their early years, they have heard of, but never seen. Not one pupil in ten, in Boston, for instance, may have ever been in any other of the principal cities in the country, and even the major part of that city he has never seen. He knows the road to school, to church, to the houses of a few of his relatives and friends, and perhaps to the cemetery, and that is all the geography he has learned practically; but when he opens his book, he is fortunately not now obliged to commit to memory a long description of how the Ohio River is formed, and remember it as a statement, as his grandfather had to do. He is not obliged to remember, as a lesson to be committed verbally, that New York is some 200 miles from Boston, in a south-westerly direction. He looks on his map and sees for himself, and instantly the faculty of Locality gives him specific consciousness of the direction; and if he knows which way north is, if the teacher were to ask him, "Where is New York from Boston?" he would point almost near enough in the right direction, if the line were extended, to touch the little island on which the city is situated. Ask the pupil the direction to Buffalo, and he will look up with utter astonishment; but if he will turn to his map, he will find that it is almost directly west from Boston, and that his eye takes in Albany, Schenectady, Syracuse, and Roch-

ester on its way over the map to Buffalo. Then he gets an idea that these places are directly west of him. If he is directed to continue the journey, he will find Detroit, Chicago, Omaha, Denver, Salt Lake City, and San Francisco; and though the line has to bend a little to hit all these places, the distance is so great that a "westerly direction" will be sufficiently accurate to describe their location. The pupil in Boston learns that New York is located south-west; also Philadelphia, Richmond, and New Orleans. When these and other important places are learned by the pupils on the map, under the direction of the teacher, the maps should be closed, and each pupil should be questioned quietly as to the location of places which have been the subject of study, and it will be observed that perhaps three out of four in a class will have a pretty correct notion of the direction. But one-half of the pupils will need some training. They are not brilliant in respect to the law of direction, and they learn the facts from the other pupils; and thus they are stimulated to renew their efforts, and many of them will engage in the study of their atlases with fresh interest.

STUDYING GEOGRAPHY IN NEW YORK.

Let us leave Boston, and enter a New York school. They have the same atlases, the same maps of Canada and the United States. The teacher asks: "Where is Boston situated?" "South-west" is not the answer, as it was in Boston; but on the other hand, "north-east." Whereas Albany is north, but in Boston Albany was west. "In what direction is Buffalo from New York?" It is not west, as it was in Boston; but it is north-west. And so Schenectady, Utica, Syracuse, and Rochester, each have a different local direction from New York, but they are all practically west of Boston. Having traveled, then, 200 miles south-west to New York, we find that all the places

north and east of us, and many of those which are west, are not in the same direction from us as they were in Boston. When we are in New York, and ask the direction of Philadelphia, the answer is "south-west," the same as from Boston, and Richmond is almost in the same direction, and so is New Orleans; but at New York we have not gone far enough south from Boston to change materially the line of direction of places so far away as San Francisco; but when we consider Cleveland, Detroit, and Chicago, the line of direction is different.

GEOGRAPHY IN PHILADELPHIA.

At Philadelphia a class of pupils, like those at New York, would look north-east for Boston; but in reference to Buffalo, again a different angle of direction would be assumed from that which would be correct in New York. So of all the other places between Buffalo and Boston. Albany, the capital of the State of New York, would no longer be north of the student, but east of north. If we go to Cincinnati, Buffalo has become north-east; Philadelphia, almost due east; New York and Boston, north-east; Chicago, directly north-west; Detroit, almost directly north; Charleston, south-east; and New Orleans, south-west or west of south; while the capital of Texas would be almost south-west; but San Francisco is west, and Montreal would be north-east, while at Boston, Montreal is north-west, and at New York and Philadelphia, nearly north.

Going to New Orleans, everything again changes in relative position. Suppose a teacher worked a year in Boston, a year in New York, a year in Baltimore, another in Richmond, another in Cincinnati, another in Chicago, another in New Orleans or San Francisco—and such a thing is possible—his teaching of geography, and his conception of it, would be very different from year to year.

A SCHOOL ON WHEELS.

Now why not have pupils taught, while in Boston, to place themselves in New Orleans (in imagination), with atlases closed, and be required to tell from there the direction of every other place. A large outline map might be made on the blackboard, showing the Canada line, the Atlantic, Pacific, and Gulf coast-line, not nicely drawn, but simply in rough outline; and the teacher, with a long wand in hand, might ask the school the location of some particular place. He might put the stick in the center of the board, and ask how he should move it in order to locate Boston; and he would continue to move it, under their direction, until one said, "Stop." And some one would say, "Move it a little more to the right;" another would want it a little more toward the top; a third would say, "A little more toward the center," until they had located Boston to their satisfaction; and there let a mark be made with the piece of chalk that is fastened to the end of the stick, and if he chose, he might put a letter B there. Then let him ask for the location of San Francisco, and the pupils would be wide-awake in telling the teacher how to use the wand, until they were satisfied that it rested in the right place, and then let him make a mark; and so he might locate, according to the judgment and direction of the pupils, till he had all the principal places in the United States located. If the pupils were in grave error about the location of any place, the teacher should settle it before he made the mark; but he would soon find that the pupils would be wide-awake under this sort of teaching, and he would have to keep his eye on the atlas in order to correct the localities which they unitedly would make.

Having made these localities on the blackboard, he would take his school, in imagination, to Chicago, and ask them what then would be the location of all the places they had

marked down. Imagining themselves in Chicago, they would learn to judge the relative location of all these places; and when they had settled upon what the location really was, meridians might be drawn east and west, north and south, and then they could very easily determine the nominal direction from one place to all other places.

Then the pupils should move to Montreal, and consider the direction from that place to all other places, and so from one part of the continent to all the other parts, until their minds became so familiar with the geographic locations that they would only have to think of Cincinnati in order to know how to locate from that place all other places.

Having attained to this point, and the pupils being familiar with the method of locating the different places, and of course knowing in what States they were respectively, they would very soon begin to understand so as to know how to draw maps. The teacher could then stand with his wand, with chalk attached to the end of it, and ask what direction he should draw a line, beginning at the northwestern boundary of the State of Maine, in order to describe that State, and he should go slow, under the direction of the pupils, and stop when they said "Stop." Then he could go on with New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut; then the great States of New York, Pennsylvania, and Ohio. The mistakes which would be made thus, under the direction of the pupils, would be apparent, and of course amusing. They would get their States laid out, and perhaps have a great deal of territory left; but they might draw the outline of the New England States, and then draw the States of Texas and California. Or it might be better, perhaps, to draw the rivers and great lakes first, for these are natural boundaries, and have the political divisions come in afterwards.

It will be seen that, in this method of teaching geography, the faculty of Locality is brought into exercise. The moment we begin to draw the maps of the States, the faculties of Form and Size are brought specially into use; but the mere outlines of the States have more to do with the faculty of Locality, because that relates to direction, and if a pupil studies his map, he will see the direction of the outlines of the States. The faculty of Form will give him the general shape of the whole; but as geographic outlines are made first, Locality takes into cognizance the direction of the lines.

GEOGRAPHY A LIVING FACT.

Instead of the dry drudgery of looking at a map, or studying the text of a geography, let the questions of geography become a literal fact to the pupils. Chicago will become interesting to him, besides its mere name—for it has a place, and a direction, and a distance from other places. The question of distance of course involves two faculties—one that of Size, and the other that of Number, or Calculation, since it is expressed in numbers. But a pupil looking upon the outlines of maps with the great towns upon it, if he can know that it is 2,500 miles from Boston to San Francisco, and 1,200 miles from Montreal to New Orleans, and 200 miles from Boston to New York, or 150 from New York to Albany, or 90 miles from New York to Philadelphia, he will very soon learn to estimate distances on the map from one place to any other place.

We submit that this is the kind of geography that pupils should be taught in school. It is never learned now until the pupil has traveled it. We laugh over the ignorance of people on the other side of the water, in respect to the geography of America, when, in point of fact, if we were asked questions in regard to the Old World, without having an European map before us, we

would make blunders equally ridiculous. During the war we saw in an English paper a description of "Jersey City, opposite New Orleans, on the west bank of the North River." Letters are sent sometimes from England to "Boston, State of New York;" and Boston is spoken of as the "capital of New England," as if there were not five other capitals of as many other States in New England; besides, until recently, two States with duplicate capitals. When a man starts out for the first time to make a journey of 1,500 miles, it amuses one who has a practical knowledge of the geography of his country, to hear the questions some men will ask, and see with what wonder they will look over the map in a railway guide.

The utility of such a practical knowledge of geography must be manifest to the reader, and if he will learn it for himself, he will feel that it is a source of pleasure. It makes him almost ubiquitous. He can stand in the capital of any State by imagination or in fact, and seem to see all other States, and all the places of importance in them. He can thus go everywhere and yet be at home. He is not a scholar in geography until he can do this.

Let us now imagine the atlases closed, and let the pupils in geography, little and large, be in session for instruction, in what we will call mental geography. Would not all the pupils know the statement that Albany is north of New York, or that it is west from Boston, or east from Buffalo? That statement might be learned just as we would learn the lines—

"Thirty days hath September,
April, June, and November," etc.

That is a rehearsal like a stanza of poetry, and we thereby get the facts as to which months have thirty days and which have thirty-one, as a *statement;* but the intrinsic fact of the days in each month of the year should be

remembered independently of that rehearsal. So we might learn to rehearse facts in geography. One might lie in bed, in some place far from home, without knowing which way from him is north or south, east or west; and it would be well enough then for him to say, Albany is west of Boston and north from New York, and east from Buffalo and south from Montreal.

But the pupils are now in session, and they are waiting for the sport. The teacher says: "We are now in New York. Think for a moment where Boston is. Get it into your minds where you would point if you were going to point at the State-house in Boston Common." Then tell every pupil to look directly at the teacher, and instantly lift his right hand and point to Boston. Those that have a sharp, clear idea of north, south, east, and west, and then of the relative position of Boston, as it respects New York, will have their finger pointed so that it would strike that little patch of sacred ground of which Boston is so justly proud—we mean the Common. The pupils who point north, or east, or in any direction but the right one, will be corrected by the way the others point. When the arm of each pupil is thus stretched out towards his ideal location of Boston, let him look around to see where the others are pointed, with the injunction to keep his own hand in the original position. Then let the teacher point as near as he may—and of course he must be well-posted—and each one will see how near right he is by comparison; then let the hands all come down, and instantly have the question asked: "Where is Albany?" And if the hands are all pointed in the right direction, that will be settled. Then try Utica, Syracuse, Rochester, Buffalo, Niagara Falls, Detroit, Cleveland, and Charleston.

When through with the New York exercise, and the pupils have become thoroughly familiar with it, imagine

the school to have moved to Cincinnati, and a new sensation will come over the school, and the pupils will look at one another and say, "Why, we are now in Cincinnati!" They there would have to "re-orient themselves," as the Germans would say; and when they had to point east to New York, it would be really funny; or north-east, instead of north-west to Buffalo, it would be a new idea. The teacher might then promise the class that at the next lesson they would view the United States from some other interesting point, and the pupils will thus be kept on the *qui-vive* in respect to where they are going to *live* during the next geographic recitation.

Will not pupils study their maps more industriously when such recitations shall have become common? We recommend that recitations, from the place where schools are located, shall become thoroughly familiar, so that pupils shall point, with almost absolute accuracy, to every place of importance in the country: and then imaginary excursions may be taken to New Orleans, to Montreal, or San Francisco; and this should be so varied, from time to time, that the pupils shall become as familiar with the direction to any place, from any other place, as they are at their homes; so that at any time hereafter, whether the pupil shall be in Chicago, Cincinnati, St. Louis, Memphis, or Vicksburg, he may be able to recall the relative distance to, or position of, any place that may be named. Imagining himself anywhere else but at home, he will learn to do that as correctly as he will think of the different places in the country, in respect to their direction from his residence. When a school has thus studied our own country, other countries may be taken up and studied in a similar manner; and when pupils thus trained leave school, they will know something of geography, and of the world, which will be both pleasant and profitable to them.

With such a method of education, being based on the faculties themselves, using the maps as a means of guidance in the instruction of the faculties, people will come after awhile to such a point of education in this matter, that the map will be in the mind; that is to say, the great country, made up, as we have divided it, into States and counties, coloring one green, another blue, another yellow, and another pink, shall become a reality in the mind of the thinker, without any of the artificial outlines which the map gives us.

A man who has traveled from town to town in a given State, taking the census, for instance, or canvassing, does not need to be told that the State of New York is a sort of three-cornered affair. Political geography, also, is really as much a subject of study as the physical, but they exist both independently, and in combination. In studying physical geography, one who takes the Missouri River, with its long eastward sweep from the Rocky Mountains to St. Louis, does not need to know the fact that it has anything to do with Nebraska, Iowa, Kansas, or Missouri, as States. When we travel through these States, we have to be informed when we have left one State and entered another. Sometimes there is some natural boundary which we understand, and we know that crossing the Missouri, at a certain place, we go into Kansas, or into Nebraska, or Missouri. When we take physical and political geography into account together, then rivers, lakes, and seas become interesting as boundaries for States and countries.

We believe that there is no study which can be made so thoroughly interesting to pupils as geography, and there is a very large field of information on the subject which, if it were properly presented through the faculties of Locality, Size, and Form—thus representing the physical geography, the routes of the rivers, the ranges of

mountains, the forms of States, their magnitudes, and their relative positions, one to another—it will become a source of wonderful interest. Take, for instance, the Mississippi River, and it would be an excellent exercise for the pupils to tell through what States it flows, and to what States it gives boundary-lines, east or west; and what States, situated on each side of that river, are lying over against each other.

Another good lesson would be to imagine the school situated in some State, and let it be determined in what direction, as a whole, any one State were located, with reference to that particular one, where the pupils for the time are supposed to be located; and that would enable them to travel, at least by imagination, with many of the benefits and none of the drudgeries of actual travel. We may appeal to those who have traveled largely, until the whole United States, or a considerable portion of the territory, has become as familiar to them as the blocks and wards of their own city, or the districts and neighborhood of their town, and ask them whether this knowledge is not a source of great gratification, as they sit by the fireside, and in imagination retrace all their wanderings. This knowledge may be obtained at home, at least in the abstract; and though a man, when he has seen Cincinnati leaning against, and reposing upon, the beautiful hills that lift their heads high above the river; or having been in Pittsburgh, he can seem to see the great central promontory between the two rivers, with the struggling endeavors of the city to climb its steep sides; and the black hill that lies like a cloud westward of the city, made luminous in the dark night by the fire of many furnaces; while its beautiful neighbor, the city of Allegheny, stretches off to the northward—though this picture on his memory having been seen, "as through a glass, darkly," by a residence here, is more vivid than his mere geographic knowledge

could make it—still the New York school-boy, if taught rightly, can have its locality in his mind just as distinctly, as a mere locality, as the traveler can who has been in Pittsburgh a hundred times.

In the study of the geography of the different countries, the teacher can interject a thousand interesting facts as to the productions of the several countries, from the fur-bearing regions of the poles to the lands of the palm and the vine; the manners and customs of the people, their political history, and the products which contribute to the commerce and the comfort of our own country. This course will ripen and benefit pupils, while it interests and instructs them.

EVENTUALITY.

THE HISTORICAL FACULTY.

This faculty has to do with events, hence its name. It takes account of the *activities* of life. That part of speech in grammar, called verb, relates to those facts and conditions recognized by the faculty of Eventuality—such as "I came, I saw, I conquered; I hoped, I feared, I suffered; the battle was fought; the ship was wrecked; or the voyage was successfully made." We ask, what happened? what took place? what was said and done? what was attempted and achieved? History, then, is a succession of transactions, doings, changes, and achievements. Imagine a man so related to life that he has to-day lost the recollection of what took place yesterday, how utterly incapable he would be of conducting the affairs of his life. We sometimes meet men who are affected by illness; they forget; their memory is gone, as it is said. They will ask the same questions several times in an hour. They ask

to-day why something is not done, which was done yesterday at their request. Old people sometimes lose the power of holding the chain of events. They seem to recall the facts of long ago better than the facts of to-day, yesterday, and last week. They will tell what they did when they were children, and they will recall and remember the faces and facts relating to their early friends; but the facts of their own daily life, after they have passed a certain point of great age, they seem to lose. It appears to be a law of the mind that knowledge acquired when the mind is fresh and young is retained longer than that which comes later. Most persons, sixty years of age, will perhaps appreciate the fact that they have vivid recollections of some things which occurred during their school-day times—facts of no particular value, but they are treasured with a sensitive tenacity which makes one feel happy or chagrined, guilty or ashamed, according to the nature of it; while facts occurring forty years afterward, of a thousand times more importance, have not made such an impression upon the mind, nor been retained.

MORNING-STUDY THE BEST.

Persons of slender constitution, who are students, will find that the topics they study in the morning, when the brain is rested and fresh, and the whole system has been recuperated by the night's repose, will be remembered much better than that which they learn in the latter part of the day, when the system, especially the brain, has become exhausted and weary. If such pupils could take an hour of sleep in the middle of the day, and thus interject a short night into the long day, they would be able to accomplish more, with less wear and friction to the system. This illustrates the memory of facts in early years, and the lack of memory of facts in later years. We have met students who have acknowledged, when this matter was

stated to them, that they did remember better that which they learned in the morning than that which they studied in the latter part of the day, and that one hour in the morning was worth two hours in the afternoon. A person of full habit and robust constitution, who is a little too physical for study, will get just ready to work, will get his brain cleared of the extra vitality, at the close of the day. Some horses seem to be stiff and clumsy in the morning, and not in a condition to travel well. They seem to be full and puffy, and we call them lazy; but about four o'clock in the afternoon they get limbered and seem to travel easily, and they will count off the miles more rapidly and freely than they did in the early part of the day—just as some of those fleshy, physical people, who have too much blood, will do better after they have been five or six hours in the mental harness.

A STORY THE BEST VEHICLE OF KNOWLEDGE.

Those in whom the faculty of Eventuality is strongly marked are delighted with rehearsals of historic matter. They want to hear a story. The organ is generally large and active in the heads of children. They have much to learn when they are young, and most children are exceedingly fond of a story of any sort. Who has not wept over the story of Joseph? Suppose the statements involved in that story were to come to us in a philosophic form, and every principle involved in it were brought out in sound and logical order, it would not have half the effect on us that the narrative does. The story of what happened, what was said and done, excites our logical faculties, our indignation, our affection, and our sympathy. Legends among the Indians, and other nations—and the history of their fathers—especially among the Jews, is handed down from generation to generation. The Old Testament is full of narratives. The people are reminded of what the Lord

has done for them by bringing them out of Egypt, and releasing them from the house of bondage, and sending them through the wilderness; and that people have large Eventuality, and we presume they remember more of their nation's history and the history of their religion—more of what their ancestors have done and been—than those of other nations and religions.

TEACHING BY STORY.

The teacher will take advantage of this strong trait in the character of the young to impress upon them facts in regard to discipline and facts in history; will give anecdotes about what has occurred in the way of blunder in teaching, or in recitations on particular subjects; and if there is a little mirth in it, it will reimpress each fact upon the mind of the whole class. The child that puts its finger in the candle might or might not remember his curiosity, his efforts to reach it, the brilliancy of the flame, and the warning counsel that was given him; but when the fire burned his finger it awakened several faculties besides the sense of feeling, and he never fails to dread the fire after he has once been burned. History, as it is studied in schools, invites the activity of Eventuality to remember the facts; it brings into use the faculties of Time and Locality, to remember the chronology and geography, and when statistics are involved it brings the faculty of Number into use.

SEVERAL KINDS OF MEMORY.

Every intellectual faculty has its peculiar kind of memory, though it is often supposed that there is but one kind of memory. This is an error. Individuality remembers things; Form, their shape; Size, their magnitude; Weight, their density; Color, their hue; Acquisitiveness stimulates to the memory of value; and Ideality, if the things be beautiful, will also be a means of deepening the impression. But memory is intellectual, not emotional. If the intellect

were made entirely unable to act, the emotions might exist, but there would be no memory connected with their efforts. Eventuality, then, remembers transactions; Casuality, the reasons, and causes, and logical principles; Comparison, that which is analogical; and Language remembers words, and Tune recalls sounds. But these faculties work together, because, in acquiring facts, they coöperate.

We perceive an object. It has form, size, weight, color, and number of parts. There is a time in connection with its existence, and the observation of the one who sees it; and then it moves, and there is a result; and the memory of what these faculties do, in the way of appreciating these particulars, is an event which Eventuality has to remember in respect to the action of the other faculties. But they have their own memory, and aid in forming judgments in respect to the qualities and conditions to which they are adapted.

The organ of this faculty is located in the center of the forehead, or rather the two organs are located, side by side, by the dividing line which separates the two hemispheres of the brain, and when large they give to the forehead a special roundness and fullness at that region. (See fig. 14, p. 69.) The brain, all anatomists know, is composed of two equal hemispheres, separated by a thin membrane from the root of the nose to the back of the neck; and as all the organs exist in pairs, those lying along the middle, or dividing line, lie side by side. These are Individuality, Eventuality, Comparison, Human Nature, Benevolence, Veneration, Firmness, Self-esteem, Continuity, Inhabitiveness, Parental Love, and Amativeness. These being located together are sometimes regarded as single organs by those who are not well-informed in the matter; while Destructiveness and other organs on the side-head, situated a considerable distance apart, are recognized by them as double.

THE FACULTY OF LANGUAGE.

ITS HISTORY, ANALYSIS, AND CULTURE.

This faculty enables man to communicate, by means of articulate and inarticulate sounds, not only his thoughts, but his feelings and sentiments. To talk is natural, but the special style of speech is artificial and conventional.

Dr. Gall discovered the organ of Language when he was but a school-boy. He noticed that those who had full and prominent eyes excelled in verbal memory. They could learn lessons and recite them with fluency, while others, including himself, were not able to commit to memory, or remember words successfully. When he left his first school and entered another, he was able to point out every one who was his superior in the matter of verbal memory. Of course this was simply the observation of a child. He afterwards learned why the eye was pressed outward. Persons have been known to lose the power of speech in consequence of some disturbed condition of the brain, and after death, dissection indicated a lesion of the brain just over the upper orbital-plate, which constitutes the roof of the eye.



Fig. 22.—ELIZA COOK.—LANGUAGE LARGE.

NATURAL LANGUAGE.

Before and beyond speech there is a natural language of motion, attitude, gesture, and expression of features. There is also a natural language of inarticulate sounds,

which is common to all tribes of men, and some of these inarticulate sounds are made by the lower animals. The groan is universal. It does not need classical learning to appreciate it. The lowest human being on earth, the wildest savage, appreciates it as readily and accurately as the wisest philosopher. The sigh is bounded by no lines geographical or political. The laugh everywhere on the globe is the same. Even animals understand this, and the groan and sigh correspond to the voices of many of them. The laugh is peculiar to man. The child of the German, the Italian, the Spaniard, the Frenchman, the African, the Patagonian, and of the Choctaw, cry alike. So that the groan, the sigh, the cry, the laugh, are universal language, and do not need to be learned. They express the same wherever heard, and need no explanation.

Birds have a language which they understand. We call the gabbling of geese, the chattering of magpies, and the clatter of sparrows, mere racket, but there is no doubt they communicate pretty clearly with each other. Dogs, cats, horses, oxen, lions, tigers, and wolves express by sounds ideas which they comprehend. They may be simple; but if a wolf wants help to attack a man or a horse, his bark expresses it to all the wolves within hearing. There is an intelligence among animals, and facility for communicating with each other, which far surpasses the general belief on the subject.

When the hen, proudly, happily, and anxiously, steps forth from her first nest, with her brood of chickens, she gives a motherly "cluck," at frequent intervals, and the chickens seem to understand it. To them it seems to say, "Come, this is the way. Here am I. Here is protection." Finding some morsel of food, she gives a sharp, short call —the first time she ever uttered it, and the first time the chickens ever heard it. They comprehend it instantly, accept its meaning, and however much they may be scat-

tered from the mother, they run. Where? Under her brooding wings? No; but to her beak. Each one knows that a precious morsel is to be had, and that there is the place to find it. And within the first hour after the mother has left the nest with her brood, she will scratch and the chickens will run to see what she has found. They will answer her call as we have stated. And if she gives the warning of danger from their common foe, the hawk, one outcry will make every chicken hide in a moment. Not one of them is in human sight. They have instantly crept into some crevice, or under a leaf, out of sight of hawk and man. Then the hen cackles in alarm, and as long as she continues it they keep hidden; but the moment the danger is over, and she gives forth again her motherly utterance, the first "cluck" brings every chick from his hiding-place. Shall we be told that these birds, inexperienced as they are, do not understand their mother? That the sounds she utters are not thoroughly intelligible to them, and that, too, the first time they are heard? We think chicks are a good example for children in respect to implicit and instant obedience. So much for natural language.

ARTICULATE AND ARTIFICIAL SPEECH.

In this connection we have chiefly to do with articulate and artificial speech. Speech of some sort is natural to men. The different tribes and nations of the earth have languages with more or less generic resemblance, but which, on the whole, are different. It seems a little singular that any healthy, normal, well-developed man on this planet, should meet another man, well-endowed with similar faculties, and they not be able to communicate with each other; but let them stay together and each man will learn the other man's language. Two lions, tigers, wolves, dogs, eagles, hawks, geese, hens, or sparrows would understand each other. Perhaps the different tribes or varieties of lions,

wolves, dogs, or birds might not communicate so as to understand each other. Let the German and the Englishman meet, and they will not be long together before each will learn how to express his wants in the other's native language. A child born into a family, or if adopted into one with a language different from that of his father and mother, will, in two years, understand nearly everything that is said to him, and be able to communicate his thoughts with more or less freedom and clearness; and in five years the child may have learned five languages, and speak each with equal facility. We who speak it do not wonder that an English child learns the English language, or that a German child learns his mother-tongue; but when a child is favored with an English-speaking mother, a French governess, a Spanish nurse, a German cook, a Swedish waiter, and a Russian coachman, we find that he will pick up all the languages and speak them with rapidity before the sixth birthday. Elihu Burritt, who is called "the learned blacksmith," learned to read fifty-two languages, by studying eight hours a day for many years, while he worked on the anvil eight hours, and spent eight hours in sleep and recreation; but a child, with its inexperience, and immature life, and without culture, can pick up more than one language a year for the first five years, if it has an opportunity.

The vowel sounds—a, e, i, o, u—are found in all languages. When we come to the consonants there is more of the artificial, or conventional. The German finds it difficult to pronounce, as the English do, the sound represented by the letters *th*. The Frenchman and the African will give the sound of *z* or *d* in the room of *th*.

WORDS DO NOT MEAN THE SAME TO ALL.

A single, national language seems to be very definite; but certain it is that all people of a given nation do not

understand words in the same way. There are shades of meaning which a man of one temperament and organization will apply to a word, and other persons will understand it a little differently, because they differ in their organizations. The word "courage" does not mean the same thing to a timid, craven, cowardly person that it does to one who is brave, generous, and magnanimous. The word "fear" has an intensity of meaning to one who is excessively developed in Cautiousness, and who has a highly-wrought Mental Temperament. But to a man who is hardy, healthy, well-organized, broad in the base of the brain, and not very large in the upper back-head, recognizes in the word fear something that is to be guarded against, of course, but it does not excite in him such emotions as it does in the person organized on a more sensitive and excitable pattern. Love, hatred, pride, ambition, beauty, elegance, respectability, generosity, are words full of meaning to those who have great strength in the mental elements out of which these sentiments grow. The words great, small, rough, smooth, pretty, ugly, are understood measurably by every person of common intelligence, but what different shades of meaning they attach to these words! The man who is accustomed to cut granite, or to hew logs of timber, or to construct turnpike roads, uses the word smooth with a much more limited meaning than he does who is a steel-engraver, a silver-plater, a goldsmith, or a piano-case maker.

DIFFERENT STYLES OF SPEAKING.

The facility with which one speaks that which he thinks and feels indicates the function of the faculty of Language, but the style or characteristics of the language which persons use is, of course, varied and colored according to the temperament, strength, and peculiar combination of the other faculties. A man with large Self-esteem and

Firmness will become familiar with all the words born of dignity, authority, and power. One who is large in Destructiveness and Combativeness will become master of, and give special emphasis to, the words which relate to force, courage, severity, and acrimony. One in whom the Social organs predominate will learn all the lore of love, friendship, and affection; will have all those adjectives at his tongue's end which savor of sociality, or serve to illuminate those faculties which minister in that domain. Those in whom Approbativeness is large will speak eloquently of respectability, of good society, of style, elegance, and whatever ministers to ambition, and will be adepts in the use of those words which carry the unction of flattery. One with predominant Veneration and Cautiousness will speak of the fear of God, and will dwell painfully on "the terrors of the law."

THE SLY AND CAUTIOUS TALKER.

A man with large Secretiveness, combined with Cautiousness, with less Combativeness and Firmness, will be specially familiar with, and employ with great effect, all words which relate to fear, anxiety, solicitude, policy, and guardedness of conduct and expression. He will learn how to shave a subject very closely without hitting it; how to go gracefully around those crooked, unsavory phases of life which may not be laid open or exposed. In short, he will learn how to talk and say nothing; and how not to commit himself. Will button-hole a man and take him to some out-of-the-way place, and whisper suggestions, instead of uttering courageous and manly facts and opinions. Whereas, with small Secretiveness and Cautiousness, and large Self-esteem, Combativeness, and Firmness, the person will drive right onward in the outspoken expression of the very core of the subject; will talk loudly and not care who hears him. Those in whom Mirth-

fulness is large will be free and ready in the language of wit. Those in whom Ideality is large will be inclined to speak of the beautiful, the sublime, and the poetical; will incline to exaggerate and employ the superlative degree of comparison. To them, things will be perfectly splendid, gorgeous, and august.

Persons destitute of the poetical and imaginative faculties will be calm, accurate, dry, very realistic. Their style of language will resemble a grape-vine in the month of March, pruned close to the trunk; while one with the imaginative faculties strongly developed, will have a style resembling a grape-vine in the month of August, with its umbrageous foliage and laden with fruit. He knows how to develop from the dry stick of truth a great deal that is flowing, showy, and fragrant.

Those who are largely developed in the reasoning organs are inclined to use words that are solid and ponderous. They will speak realities. Their language has sturdy verbs and nouns. Webster illustrates this style in his masterly speech in the Senate, in reply to Hayne, of South Carolina, when he uttered those great, heavy words, rich in meaning, but without a semblance of decoration:

"MR. PRESIDENT: I shall enter on no encomium upon Massachusetts—she needs none. There she is—behold her, and judge for yourselves. There is her history; the world knows it by heart. The past, at least, is secure. There is Boston, and Concord, and Lexington, and Bunker Hill; and there they will remain forever. The bones of her sons, fallen in the great struggle for independence, now lie mingled with the soil of every State from New England to Georgia; and there they will lie forever. And, sir, where American liberty raised its first voice, and where its youth was nurtured and sustained, there it still lives in the strength of its manhood, and full of its original

spirit. If discord and disunion shall wound it; if folly and madness, if uneasiness under salutary and necessary restraint, shall succeed to separate it from that union by which alone its existence is made sure—it will stand, in the end, by the side of that cradle in which its infancy was rocked. It will stretch forth its arm, with whatever vigor it may still retain, over the friends who gather around it; and it will fall at last, if fall it must, amidst the proudest monuments of its glory, and on the very spot of its origin."

On the other hand, those in whom Language is large, and all the perceptive organs are strongly developed, are apt to have a redundancy of descriptive words, which unfold and give varied shades of meaning. The famous Irish orator, Phillips, attended a banquet in Boston in 1794, at which an American gentleman had been requested to respond to the sentiment, "America." In resuming his seat the American offered the sentiment, "Ireland and her orators." Mr. Phillips, being then Ireland's most popular orator, was called upon to respond, but of course he could not appropriately speak of Ireland and her orators, though he could illustrate the fact that Ireland had orators, and that he was one of the best of them; but as he was responding to a sentiment offered by an American gentleman, he must speak of America, and he uttered himself in this florid manner. The reader will observe the redundancy of adjectives:

"Americans: You have a country vast in extent, embracing all the varieties of the most salubrious climes. The exuberance of your population is daily divesting the gloomy wilderness of its rude attire, and splendid cities rise to cheer the dreary desert."

If we lop off the beauty which these adjectives impart, and reduce it to sober nouns and verbs—give it a Websterian turn—it would read: "Americans: You have a

great country. Your people are cutting down the forest, and erecting houses in its place."

THE SUBLIME AND THE RIDICULOUS.

A man who is cultivated, so that he will understand the best use of words, will talk with propriety and correctness; but his style will be in accordance with his mental organization, or according to the group of faculties awakened by the subject. Webster had Ideality and Comparison largely developed, and when his theme awakened those faculties, he could employ elegance of diction, combined with strength of thought. That beautiful passage of his in relation to Bunker Hill monument, so familiar to every school-boy, will never grow old:

"We wish that this column, rising towards heaven among the pointed spires of so many temples dedicated to God, may contribute also to produce, in all minds, a pious feeling of dependence and gratitude. We wish, finally, that the last object to the sight of him who leaves his native shore, and the first to gladden his who revisits it, may be something which shall remind him of the liberty and the glory of his country. Let it rise! Let it rise till it meet the sun in his coming; let the earliest light of the morning gild it, and the parting day linger and play on its summit."

Persons who are not cultivated, pick up language, but are apt to use it with more or less impropriety. We hear every day persons using language tautologically, and nothing is more ridiculous than this, except that which is absurd. A loquacious son of the Green Isle, whose duty it was to attend a toll-bridge, was directed by the owner, as he rode by rapidly one morning, to put up a notice, saying the bridge is free. Willing to obey the order strongly and heartily, he wrote and posted up this

notice: "All persons, of every description, hereafter, for the future time to come, may pass over this bridge free, gratis, for nothing, without paying a cent."

LOCATION OF THE ORGAN OF LANGUAGE.

The organ of the faculty of Language is located in the base of the frontal lobes of the brain, and rests on the arch of the socket of the eye, and when well-developed it has a tendency to depress the arch which constitutes the roof of the eye-socket, and thus press the eye ball downward and forward, giving to the eye-ball itself a protruded, full appearance, and a tendency to hang over the cheek-bones, and show a sack or fullness under the eye. During life there is no opportunity for a tangible examination of this organ. It has to be estimated by the looks, position, and appearance of the eye. In some persons the eye seems to be sunken in, as if it were small and the socket too large for it. In children, especially, the eye sometimes seems to stand right out, and people talk of "the speaking eye," or "the intelligent eye," and "the expressive eye." A little observation will enable any person, in a group of people, and especially in a school, to see who are the talkers, the whisperers, those who like to communicate, and can not keep the tongue still.

TALKING EXCITES THE EYE.

There seems to be connected with the process of talking an excitement of the eye We rarely meet with a person who talks well and keeps his eye in a calm and placid condition. There is a flash, a rapid opening and closing of the eye, when Language is excited. A teacher who is a friend of ours, and of phrenology, named Weaver, had a boy in his school whose Language was exceedingly poor. He was a very poor reader and speller, and when he was trying to spell, he would shut his eyes almost

tightly together, and keep winking them spasmodically and ridiculously. The teacher asked him why he shut his eyes and puckered them up so when he was spelling, and if he could not spell without doing it? He said he could spell without doing it, but he could not spell nearly as well. Mr. Weaver suggested to me that the excitement of the faculty of Language might affect everything connected with the eye in this boy, and it seems reasonable. If the eye of the orator be lifted when he speaks of astonishment, or it dance with delight when he speaks on subjects that are pleasant and mirthful, is it unreasonable to suppose that the region of the brain, in which the faculty of Language is located, should excite everything that pertains to the eye itself?

WEALTH OF LANGUAGE.

When the organ is large, there is a tendency of the person to put the thoughts and emotions into some expression by means of words. When a child has large Language, and lacks experience and knowledge, it will talk to itself; will use words without much meaning. If it have an active imagination, it will invent words, fables, and stories. If a person have large perceptive organs, he will see everything, and appreciate its qualities and peculiarities, and have fine descriptive talent. Bayard Taylor, with his great perceptive organs, employs his large Language most charmingly in his minute and extended descriptions of scenery, and his letters and books are read with intense interest. Charles Dickens had a superlative development of the faculty of Language, with strong perceptive organs, but still stronger reasoning and imaginative powers; hence his creations of characters, and his eminent ability to depict character in all its detail. He had the power of expressing all his thoughts and emotions. Perhaps no man that England has produced, since

Shakespeare, could express himself with equal copiousness, fullness, and exactness. In fact, he took his language, so to speak, twice around the subject. Indeed he festooned it, varying it as he proceeded.

CHARACTERISTICS OF LANGUAGE.

Those in whom the faculty is deficient, though they may have excellent reasoning power, will use but few words—say two thousand—in all their range of expression; while another person, in conversing upon the same subjects, and having only the same amount of knowledge relative to it, will use five thousand different words in the course of a month's conversation. Those in whom Individuality is large fill their language with nouns. Those in whom Form, Size, Weight, Color, Order, Number, Locality, and Time are strongly marked, will put in adjectives descriptive of things, persons, and subjects. Writers and talkers, on the other hand, who are remarkable for their metaphysical developments, with a large top-head, will incline to use their language in abstract discussions. Those who are very strong in the social department will talk of that which pertains to affection and sociability. The language of courage and heroism is inspired by Combativeness, Destructiveness, Firmness, and Self-esteem The language of love by Amativeness, Conjugality, parental love, and friendship; and patriotism comes from Inhabitiveness. The language of religion and piety comes from the moral group. The language of mechanism, poetry, and property, prudence and policy, from the organs in the side-head. Of course all these emotions and aspirations are guided, controlled, and enlightened by the influence of the intellect.

CULTIVATION OF LANGUAGE.

No other faculty is more susceptible of extended cultivation than this. Those who feel the lack of conversa-

tional power should endeavor to cultivate the faculty by using it. Reading aloud to friends, or even alone, is an excellent way of bringing out the power of expression and of thinking at the same time—in other words, bringing thought-power and the vocal-power into coördinate action. We may know music, but not be able, for want of practice, to perform it. The mind may think, but not think in words; and we may think in words even, and from lack of habit the vocal organs will not be able to express them. Writing serves tolerably well, but spoken speech, giving natural action to the faculty and to the vocal organs at the same time, is far better as a means of culture. Africans are very sociable. They can talk easily, and they talk much; and whenever they have an opportunity to learn, they talk well. In them the organ of Language is large, and their eyes are proverbially full and prominent. The North American Indian, on the other hand, is more reticent, less sociable in his disposition, and less talkative, and that deficiency of the development of the organ is manifest.

COMPOSITIONS IN SCHOOL.

Children should be taught, in the school and in the family, to use correct language. If a mistake be made it should not be an occasion for fun, but kindly assistance should be rendered to enable the child to express himself with clearness, correctness, and vigor. It used to be said to children that they had but one tongue and two ears, therefore they should hear much and speak but little. We have known children thus trained, who, when they went into society, were seriously embarrassed, and a source of grief and embarrassment to their parents and other friends, because their inability to talk made them seem green and stupid. One of the errors of teaching has been to permit children to write compositions on some

abstruse subject, with which they had but little acquaintance. On the other hand, they should be encouraged to write familiar letters to their friends, on common topics which they perfectly understand, and in this way they would learn an easy, flowing, and colloquial style of writing. Such training would be very serviceable to them in cultivating their Language, and would enable them to express themselves with freedom and fluency.

HOME-TALK OF CHILDREN.

Children are permitted to talk at random, to use language incorrectly, and thus they get a slovenly style of expression, which mars their conversation as long as they live. We disapprove of "baby-talk" to children seven or eight years old. It is bad for children in arms even. We have known some children, who were brought up among adults, and never heard a slang word, or coarse, rough, ungrammatical expressions, or "baby-talk" at home. They never learned to clip words, or manufacture words, such as "aint" for is not; and these children would speak with deliberation, with correct intonation, and pronunciation, that would attract the attention and command the admiration of everybody that heard them. Children who at home enjoy the society of intelligent parents, who are sociable and use good language, will take a much better place in school and in society than those children who live under the cloud of silence at home, and learn how to hold their tongues and stupefy their minds at the same time. There is no faculty the cultivation of which does more to set off the character to advantage than that of Language. Persons are cultivated in dancing, in music, in art, and are expert in any kind of business which has received their attention, but their language is sometimes awkward, bungling, and inappropriate. If the faculties of the intellect be well-developed and harmonious, so that

a person thinks accurately and clearly, it lays a good foundation for the development of Language, and for its excellent manifestation. There are advantages in the study of the classics, in respect to the cultivation of the faculty of Language, and we judge that therein is its chief advantage. Man thereby learns the root and original meaning of words, and also to use several words to describe the same thing, or express the same idea, which gives richness and variety to his conversation and to his power of expression.

PUPILS' OWN WORDS VS. VERBAL RECITATIONS.

Language can be cultivated in school by requesting the pupils to close their books and answer questions, or recite the subject of their lessons in language of their own. Committing to memory may cultivate Language, but using one's own words for the expression of thought does far more in the line of cultivation. Reciting in concert will cultivate Language and train children to think and speak at the same time, or to vocalize their thoughts.

When teachers learn that language, as an art, is born of several faculties, not a mere thing to be remembered, but something to be inspired; when they learn that grammar is based on the qualities of matter and the natural order of creation; that when they see magnitude, form, or color, it excites each special faculty that belongs to the subject-matter, and that it awakens the adjective appropriate to be used, they will have a clear field for its cultivation. When the pupil, in parsing, shall learn to recognize the nature of the thing which the word relates to in the realm of nature and art, he will have a philosophical and natural basis for his grammatical opinion respecting it. Think of the properties of a given thing—large or heavy, black or white—and we have faculties for appreciating those facts and qualities, and the action of those

faculties ought to awaken Language to the expression of the part of speech, grammatically considered, to which the word belongs. Then the teacher can analyze the subject or word by comparing it with the mental faculties which appreciate it, and use language appropriate to the proper expression of the subject. As the English language is largely based upon the Latin, it is a course of rich culture to study this. As the English language has also been largely taken from the German or Saxon, he may study that language, and therein find the origin of many English words. And the same may be said of the French language. But most of the Franco-English words have their root in the Latin.

In the cultivation of public speaking in school, the faculties of Imitation and Time are called into use, to give the style of intonation, melody, and harmony of expression; and Language, meantime, is cultivated by the expression of the feelings and the sentiments, or the description of the facts or things which the pupils have studied; and as far as the pupils can be thrown out of the text-book on their own resources, and as far as they can be taught to think and express their thoughts, individually and independently, they are in the pathway of culture. The text-book may furnish hints and be a guide to them, but when recitation comes, the knowledge which the pupils have acquired should, if possible, be given in their own words. In short, that method will cultivate Language. It will cultivate all the faculties, and lead them to observe and think. And this is education.

Language is the natural outlet of the mind. It vocalizes emotion; it embodies thought and frames speech into argument; in government it is mandatory; in social life it is persuasive; in love it is tender; in writing and in print it has wings to carry it around the world, and thus crystalized it speaks to the eye, and embalms the thoughts of the wise and good for all coming time.

THE FACULTY OF COLOR.

The organ of this faculty is located in the center of the arch of the eye-brow, and when large, it gives an arched appearance to the brow, both forward and upward. Color is a distinct quality of matter, which enables us to discriminate one thing from another. Two objects may be precisely the same as to size, form, and weight, differing only in color. Billiard-balls are supposed to be exactly alike in size and shape; but one is colored red for a particular purpose. This is the only mark of distinction between it and the other balls. A dozen pieces of cloth, from the same web, may be dyed as many different colors to suit the taste and fancy of buyers, while in all respects but that of color the cloth is alike.



Fig. 23.—ROSA BONHEUR.—COLOR, CONSTRUCTIVENESS, AND IDEALITY LARGE.

"COLOR-BLINDNESS" A MISNOMER.

We hear much said about color-blindness. It would be just as proper to talk of music-deafness, for color bears the same relation to the eye that music does to hearing. One may discern objects and know nothing of color, as a person will hear sounds as noise, without recognizing the musical element of the sound. The faculty of Color can not be measured by the perfection of vision; for persons whose vision is imperfect will revel in colors, and rejoice in their beauty. Some people who are so deaf that they can hardly hear conversation, unless it be screamed into their ears, will listen to music, and take in its harmonies with great pleasure and appreciation. Of course, the poorness of

vision is an impediment to the nicest appreciation and relish of colors, just as the weakness of hearing is an impediment to the fullest enjoyment of music.

SIGHT AND COLOR CONTRASTED.

Sight *per se* simply recognizes light and shade. Articles having color, say blue or red, are just so much removed from the light, toward shade or darkness, and the rays come to us in a modified condition. I have met several men who had excellent sight, yet they could not tell one color from another, and they said that colors looked to them very much like ashes; namely, like something in which the colors are all blended. Yet these persons could see the forms, and judge of the motions of birds at a vast distance. One man was a sportsman, and he knew birds only by their forms and motions, and could not tell a hen-turkey from a peacock, so far as their color was concerned. In 1842 I examined the heads of Dr. Harwood and his brother, Col. Harwood, of Whately, Mass., and found Color small; and they said that in picking cherries or strawberries they could not tell which were ripe, or which half-ripe, or entirely unripe, by the color, for when the ripe cherry was situated between their point of vision and a green leaf, it seemed to be hidden, and the leaf and the cherry were blended; and if the cherry had been precisely the color of the leaf, it would have been about as distinct to their vision as when it was cherry-red. A merchant on Long Island was obliged to label his goods or put those of one color into one apartment of the shelves, for if he did not, and a lady were to ask for green silk, he would hand down red or any other color. Of course she would feel insulted, thinking she was being trifled with, while he would open his honest eyes with amazement, thinking he had done the courteous and nice thing by her. But thus learning that he could not appreciate colors as other people did, he could get along only by labeling his goods,

or having his customers point at such as they wanted. Of course, he ought not to have been in such a pursuit.

ARTISTS WITH AND WITHOUT COLOR.

Some artists draw well. They have Form, Size, Weight, Ideality, and Constructiveness, which enter into the composition of a picture; but they lack Color. We heard of an artist who would be likely to mistake or confound pink and blue, and having painted the portrait of a young lady, some one told him that the cheeks required a little more coloring; and when left alone, he undertook to remedy the defect, and put on blue instead of pink; and the lady was horrified when she came to see her picture, to behold her cheeks and lips painted blue. We know artists that are excellent in coloring, and they make the flesh look as if it were really living, and as if it would yield to pressure, yet they are unfortunate in drawing; but when a painter has the best combination of all the faculties, and in the highest degree of development, and has the culture to bring them out, he it is that becomes the immortal artist.

AN INTERESTING TEST.

About 1858 the author was invited to a house in New York to make a few examinations. He was requested to call at a particular street and number, and ask for a certain name. A few persons were collected, but the names were not mentioned. In the course of the examination and description of one gentleman, we described him to be artistically inclined; but being deficient in Color, he would be more likely to work at steel-engraving, or crayon, or marble, than in colors. There being an oil-painting and a crayon-picture hanging in the room of about the same size and apparent value, we said, by way of illustration, that if those two pictures were on sale at auction, he would bid forty dollars for the crayon, and only twenty dollars for

the oil-painting. The next man who took the seat for examination was described, among other things, to be very fond of art, but more particularly fond of colors; and the two pictures were again used as illustrations, by saying that if they were for sale at auction, he would bid forty dollars—the full value—for the oil-painting, and only twenty dollars—or half its value—for the crayon-picture. When the examinations for the evening were closed, we were introduced to the gentlemen by name; the first being the great crayon-artist of New York, Mr. Rouse, who made the crayon-picture, and the other Mr. Church, of "Niagara" fame, who really painted the picture in oil before us. We were then taken into the parlor and shown the original study of the "Falls of Niagara" by Mr. Church.

CULTIVATION OF COLOR.

We commend the cultivation of this faculty, since nothing more readily shows refinement in a boy than the appreciation of colors and the love of flowers, and the tendency to cultivate them. If a boy can attend a garden or a greenhouse, it will be to him a source of pleasure, serve to keep him out of mischief, and make him a coadjutor and assistant of his mother and sisters, and will have a tendency to make him more of a man, more domestic, more refined. In cities, flowers are much more cultivated than they were thirty years ago. Churches must be decorated with them, funerals are smothered with the wealth of floral offerings, and weddings must be made by them like a fairy garden. It would be well for gentlemen to be cultivated in the faculty of Color, so that they may enjoy and have some idea of the names of the flowers they are supposed to pay for.

This faculty is generally more active and more developed in women than in men, because little girls are dressed in

gaily-colored clothing, and their attention is more or less directed to their various shades. They become fond of pictures and flowers, and that has a tendency to cultivate the organ. Boys, on the contrary, are dressed in brown or gray clothes, because such colors do not show dirt, and boys are turned out to rough it, and whatever they wear does not, therefore, call their attention to color, or exercise the faculty. Ladies will describe the color of the eye, the hair, the dress, the complexion, while a man may speak of the complexion in general as being dark or light.

Aside from its use in art as a pursuit, a knowledge of colors is, in many business channels, the basis of success and prosperity, as well as a source of pleasurable refinement in society.

FACULTY OF ORDER.

Order is said by the poet to be "Heaven's first law." If we look around us, we see that everything in creation is adjusted according to system. By observing its method, we learn to adapt ourselves to the affairs of the world. We study its arrangements, and know what to depend upon. To a child the blossoms of spring are a surprise, and the fruits of the summer and autumn are an equal surprise; the early frost and the fallen snow make him wonder, because he is not accustomed to them, has not expected them. After awhile, when he has learned something of the order of nature, he hopes the cold winter will be past and the balmy spring return, and the summer flowers, and singing of birds, and the happy autumn with its harvests. He gets used to the order of creation and Providence and looks for its changes. Those in whom Order is most developed adapt themselves most kindly to the order of things. They learn them quickest, expect them most pleasurably, and relate themselves to all the

changes of life. Those in whom the faculty is deficient are always running their heads against the ways of Providence and the order of life.

We learn through the action of this faculty to look for all things in their season, and for everything according to the method of creation. Hence, we never look for corn in the ground, or potatoes on corn-stalks, or for corn on trees. We never expect to "gather grapes from thorns or figs from thistles." When the hen has been cheated into sitting on ducks' eggs, and patiently hopes to see them develop into the image of herself, she is terrified beyond measure when she sees her duckling brood rush into the water for the first time. They have violated her idea of order. But when a duck has been deluded into hatching hens' eggs, she is amazed to see the little chicks refuse to follow her into the water. We do not know how much philosophy the hen may exercise in trying to study the physiognomy of her newly-hatched family—why they should have such broad faces, and such amplitude of bill, such breadth of foot, and such a wallowing gait; and though she does not stop to criticise nice distinctions in regard to hereditary transmission of form and quality, she knows the difference when they plunge into the water, where she herself dare not go.



Fig. 35. HON. N. P. TRIST. He had remarkable Order in regard to things, and especially in his style of thinking and writing, and in all that related to integrity, duty, and honor.

In our disposition of affairs, we seek to have a place for things and things in their places. Cattle on a farm select a given place to lie down at night. Birds want a particular

parch, and they are restless and discontented if another takes their place. One aspect of Order gives uniform methods of doing things, and a systematic, particular place for things. Another aspect has to do with the best rule for doing things. Many have the first kind of Order, a particular way of doing and a particular place for things; but they do not always have the best way nor the best place. Persons may be orderly and not tidy; others may be very tidy and cleanly, but not methodical. But when we see a woman who has a place for each plate and dish in her closets, we expect she will see to it that they are clean and bright; though we have seen systematic and regular places for things when the articles were not tidy and cleanly. Some mechanics have everything mixed up and confused; they have finished and unfinished work together, and their tools are all mixed and confounded. Some men have their bench full of tools; they find with difficulty that which they wish to use, and are vexed because everything seems to be in confusion. Another will have a rack in which all his tools are kept, and when any tool is used it is instantly returned to its proper place. He neither loses time nor patience in hunting for his tools, nor are they injured by rough contact with other things. A housekeeper that can tell where to find any particular thing she wants, in any drawer, and in what part of the drawer it may be found, evinces this faculty.

ORDER CAN BE CULTIVATED IN SCHOOLS.

There is no place of human meeting and human work where disorder is more likely to be seen, or where order is more needful, than in the school. If the teacher have large Order, Ideality, Firmness, Self-esteem, energy, and patience, the school is a good field for their exercise, and their influence will show in great distinctness when perfect

order is maintained. We do not mean a frigid silence, or a stupid fixedness; but when all motions are made in harmony, and every change is made with the graceful precision of military evolution; the movements in the dance, the gymnasium, or a well-ordered workshop, like the "music of the spheres," there is realized the ideal of Order. The utility and the necessity of order are sometimes eminently illustrated.

Suppose a hundred boys were dismissed at the word, each being in a hurry to get out of the room, what crowding and confusion will there be, requiring much more time to clear a room than if the school were dismissed class by class, and let them march out like soldiers! And how much more graceful and elegant is the orderly process! Sometimes when a school-house takes fire in a city, and there are, perhaps, 1,200 pupils in the building, some wise person from down-stairs comes up and quietly whispers the fact in the ear of the teacher, who then, with self-possession, and without exciting alarm, announces that there will be a recess for five minutes, and class No. 1 may retire, and Nos. 2 and 3 follow. They never need an excuse for going out, and by the time they are on the street they begin to wonder what the recess is for, and find out that the school-house is on fire. Otherwise, they would have been frightened, and rushed to get out of the room, upon the staircase tumbling over each other and over the banisters amid the wildest confusion, and, perhaps, a dozen of them would be trampled to death. If in churches, people would file out of the slips or pews next the door in order, and walk briskly out, the edifice would be cleared in one-tenth part of the time that it now takes, when all crowd into the aisles and everybody is in somebody's way.

Nature having established the law of order, we could not break it if we would, and if it were in our power we could not do it without serious damage to our interests.

This faculty should be cultivated in children at home. Let the three-year-old child have something to do; let him have a place for his playthings, and be taught to recognize this law of order. If a child could throw down his playthings at pleasure, and have them picked up by nurse or servant, that child will become selfish as well as slovenly. But if it be required to put its things in the box or basket, or hang them up when not in use, and put away clothing and other articles, this faculty will become active and influential in the character, greatly to the comfort and convenience of all. The sloven is hindered, fretted, and annoyed by his own want of arrangement, though sometimes the desire for order on the part of others may annoy them and induce them to fret and scold. The pleasure experienced from order and neatness, and the pleasure and comfort the family derives from having everything nice in the house, will counterbalance, probably, all the fret and worry an orderly person may feel called upon to exercise. Slack-twisted and disorderly people have more worry in an hour in hunting for things they have mislaid, and in being vexed at people who "carry them off," than is the case with sharp, orderly people who are always trying to keep everything neat and tidy. Commend us, then, to a housekeeper that is tidy and orderly; who may grumble if people come into the house with muddy boots. Such persons will have mats and scrapers for the purpose of removing the dirt from the shoes before it shall be brought into the house, so that those coming in who are inclined to be tidy will find the means at hand for the purpose. Those who are tidy in housekeeping, and in keeping everything in its place, will make home at least worthy to be the abode of happy people. A kindly and good example will teach the family order. It is not enough to preach against disorder, or against persons for permitting or producing it.

Orderly people are apt to scold those who are disorderly; but this is not always the best way to reform the slovenly. We once saw a man put his dirty boots on the velvet cushion of a car-seat. It was a new, bright car, and the conductor felt proud of it. He came along, and, asking permission, put a silk handkerchief over the seat, and told the man if he wished he might put his boots on that; but neither he nor anybody else in that car again, during that trip, tried the experiment of using a velvet cushion as a foot-stool, and the delinquent himself was not made angry. If the forty people in the car remembered it with as much vividness as the person probably does at whose expense it was made, it, doubtless, has saved many a car-cushion from that day to this.

MARRING OTHER PEOPLE'S THINGS.

Hotels and boarding-houses bear many marks of the reckless disregard of order, as well as of the rights, interest, and comfort of others. The scraping of matches on handsome white walls, or those neatly painted or papered; the careless leaning back in chairs against walls or furniture, badly marring both; the putting of feet on chair-rounds, window-stools, fenders, or mantels, may be mentioned as marks of disorder, injustice, and ill-breeding.

It is said that "cleanliness is next to godliness." It is certainly a Christian grace to be cleanly and orderly. Those who complain of the rattle-bang boys who go slamming about and leaving everything in disorder, should early train the faculty of Order in their children; and they may, perhaps, regard it as a censure upon themselves if their children are not orderly. We once knew a farmer who, when he hired a man for the summer, if he found that the axe had not been left in the proper place in the wood-shed, but left at the chopping-block, where the new man had worked with it, he would wait till his man had gone to

bed, when he would rap at the door and call his name, and request him to dress himself and come down. He would then ask for the axe, and when it was shown him, he would say: "I looked in the proper place, but did not find it. Will you please hereafter to put it there?" It was done good-naturedly; but that young man never forgot to leave the axe in the right place, nor anything else on the farm, while he stayed there.

NUMBER, OR CALCULATION.

The faculty of Number is necessary in the mental constitution. It enables us to perceive two, as distinguished from three, or any other number. It not only enables us to distinguish between the concrete idea of number applied to material objects, and the abstract idea of number *per se*. Individuality enables us to make a distinction between one thing and another thing, but it does not count the number of them. It might give us the idea of many, as we have when we look at a load of sand containing particles numberless; thus we measure sand by the bushel, by the load, by the quart, as we do grain. We count sheep, cattle, horses, and buy and sell them by number as we do eggs by the dozen. But beans, peas, and corn we cease to enumerate, and sell by measure; so many measures for so much money.

The faculty of Number seems to be manifested in some of the lower animals who are usually most intelligent. Crows have been known to recognize numbers as high as five or six. Other birds, less sagacious, may only know as far as two or three. If ten men enter caverns or ruins which birds inhabit, they all fly away from their nests and perch near by; if three men go out they all eagerly fly back. Their idea of number has been exhausted on three, and they seem amazed to find that some men are left and again

retreat. Three more men going out, the birds rush back again, showing that three is the extent of their idea of number. Cats, when deprived of half a large litter, do not seem to appreciate the difference in number; but if five are taken away and one only left, the cat has an idea of the difference between one and six, and she will hunt to find that which is lost.

In ascending to the human species, we find that some negro tribes can count only to five and use no compound terms. They say five-one for six, five-two for seven. Others make shift by saying both "hands" for ten; both "hands" and one "foot" for fifteen; "hands and feet" for twenty. All above this is "many," or innumerable. The Esquimaux Indians have no idea of number above five, everything else is "many." The arrangement of our mathematics, while logical, as we all admit, is, when carefully examined by the light of Phrenology, apparently dependent upon the addition of one or more of the other faculties to assist the organ of Number. If mathematics be the doctrine of quantity, certainly Size and Weight must be brought into use, and in geometry and trigonometry Form and Locality as well as Size and Weight must be included. For example, we start with simple counting, using in the kindergarten blocks, beads, balls, and building-blocks; this is pure number; the why and wherefore, or the reason that two and two are not six. Then we have notation—translating the words into figures; here the perceptives come in, the immediate neighbors of the organ of Number; Individuality, to recognize the figures, and Form, to distinguish them by their shape. Numeration is justly linked with notation, as it is the converse—translating the figures into spoken or written words. Locality is also an accessory, especially in pointing off periods, as hundreds, thousands, etc., and carrying these localities in the mind. With the succeeding rules we have the study advanced.

Addition is properly placed first, as it is the easier, since it requires less mental effort to consider two quantities side by side and perceive their sum than to subtract one quantity from another, and perceive at the same time the original quantity, the quantity to be subtracted, and the result. In this process the reasoning faculties, Causality and Comparison, begin to act.

One step further is multiplication; here we have the multiplicand, multiplier and product, more complex than addition. The setting down of one figure and carrying the other to the next order of figures, or the setting down of a number of partial products, each in its own proper column, then the careful addition to give the complete product. All these complicated operations require the simultaneous carrying of several ideas, and involve a compound mental action.

The same is true of division, more complicated, perhaps. The studying of fractions, common and decimal, is still more complicated, as all teachers know.

They can easily carry out our idea for themselves. In the rule of three, and proportion generally, we have a distinct logical statement, viz.: as A is to B so is C to D, and, therefore, B C is equal to A D. Here we begin to see the utility of mathematics as a discipline for the mind. The study of square and cube root, taught, as they often are, by diagrams and dissected blocks, brings into play Form, Size, Individuality, Comparison, and Causality, as well as Number. All teachers will testify as to the difficulty of teaching these subjects successfully to the average pupil. In mensuration, weights and measures, and "concrete arithmetic" generally, if we may use the term, all the organs above named are occupied, and, at times, others. But it is in the higher branches that the aid of many faculties is demanded by Number. In algebra, for instance, application is made of principles demonstrated

beforehand which must be held in the memory; again, the mind must be trained to appreciate instantly the time when the previous demonstrated principle is applicable to the problem in hand, so that the pupil need not work out the tedious problem every time to apply his knowledge in advancing him to new standpoints as he goes along. These statements, true of algebra *par excellence*, are equally true of those higher branches—impossible without algebra, as we know—the Trigonometrics and the Calculi, together with applied mathematics generally. We are now able to perceive why mathematics disciplines the mind. Commencing, as we have seen, with a single faculty, the proper use of the science compels the brain of the scholar to use one faculty after another, until, as a climax, we find the perceptive and reasoning organs active and under control, which is the true object of education, to give the pupil a healthy, active, manageable brain.

Those wonderful calculators who have astonished the world, such as Zera Colburn, are generally not mathematicians, as he was not, though he had culture in that direction, and it was expected he would astonish the world; but as the higher organs of the intellect which comprehend philosophy and the relation of subjects were wanting, he failed. There are geniuses in language, poetry, memory, mechanics, who are born with a peculiar facility and power of manifestation, and those who can multiply mentally and work out arithmetical problems faster than the best arithmetician can do it in the ordinary way on the slate, must be regarded as possessing an exaltation, or genius, in respect to figures, and they are exceptions, as other geniuses are.

Much of the business of life is intimately related to the faculties which aid us to enter into the science of numbers and mathematics.

A mathematical cast of mind requires that the person

should follow something in which the exact and the mathematical can be made serviceable. We often meet with pointed illustrations of this. A man brought his son to our office for examination. They looked sad, discouraged, and gloomy. When the young man took his seat the father spoke in a sour sort of way, saying that he wished to know what that boy could do to earn his daily bread. After a careful examination, we replied that he could do anything, unless it was something like wood-engraving. They cast a quizzical look upon each other, when the father inquired why he could not successfully follow wood-engraving, we replied that he had so much Order and Calculation that he would want to fix a machine, or establish a rule, or use gauges to space off his work, and do it as by machinery. The father informed us that he had then just taken the boy away from a wood-engraver who had been trying for six months to teach him his business, who complained that the boy wanted to use gauges and rules, and was not willing to work by the eye. We advised the father to let the boy go at architectural drawing, or carpentry, where he would be required to work by mathematical rule, and employ mechanical ingenuity and artistic taste at the same time.

The organ is located back of the external angle of the eye, and when large, gives fullness and squareness to that part of the head. See Fig. 3, p. 25.

THE FACULTY OF TIME.

CHRONOLOGY AN INSTITUTE OF NATURE.

SINCE everything that occurs, whether the falling of an apple or the revolution of a planet, requires time; since efforts, like steps in walking, succeed each other, and all the other nameless events which occur, require time; and

each is the successor of one, and the predecessor of the next, there should be in men and animals a faculty to take cognition of this continual succession of events. The faculty of Order, which combines with that of Time in recognizing the fitness and order of succession of time and effort, and the faculty of Number, acting with that of Time, constitute the trio which relate to dates, succession, method, and periodicity. The organ is located about half-way between the eyebrow and the top of the forehead on a line directly upward from the outer angle of the eye, and when the organ is large it produces fullness and squareness of that part of the head. (See Fig. 26, p. 211.)

The organ of Tune is located backward and downward from this, and sometimes these organs seem to develop toward each other, indicating their co-ordinate action, and we have noticed that some persons are remarkable for keeping time in music who do not remember dates. Therefore, we conclude that there are two phases to this faculty, one which relates to musical time or co-operates with music, and the other which relates to the dates of events.

One of the strongest illustrations of the individualism of the faculty of Time which we have witnessed, was in a half-idiotic man in Massachusetts, who was so weak-minded he could not learn the common branches in school. He read a little, like a child, but beyond that his education was entirely wanting. His head was small, but at the location of Time there was a special fullness, and he would remember the date, the day of the month, and the day of the week on which any circumstance transpired from the beginning to the end of the year. If awakened from sleep at midnight he would tell when some person's cattle were brought to the farm to be pastured, and when they were taken away. He was appealed to as a kind of almanac as to dates, and that encouraged him to remember the day of the month and the periodical recurrence of the days of the week.

It is not necessary to dwell upon the value of improving time, but we suspect those who are well endowed with this faculty best appreciate the value of time, and are most likely to fill it with duty and usefulness. A person who has no idea of time will let an hour slip by without being conscious of having lost more than ten minutes, while one with a vivid sense of every second as it passes will feel that time is flying, is being lost; and if he has anything to do he will become restless when his time is being wasted by idlers. Some men, when called upon in the way of business, will lean back in a chair and put on a look of placid resignation, as much as to say to the visitor: "My time is of no sort of consequence; take as much of it as you wish;" while another, in whom the faculty of Time is strong and active, will appear to be busy, and his expression of face and movement of body, when called upon in business hours, seem to say: "My time is valuable, and I give you as much of it as is necessary in which to transact your business. Please proceed and let me know what you want, and you shall have the answer, that I may go on with my business." Such people are rarely bored, or, rather, those who call soon learn that they can not waste their time, and that if a worthless visit shall be inflicted it will be a bore.

CULTIVATION OF THE MEMORY OF DATES.

The memory of dates is a most important matter. It can and ought to be cultivated. We believe that most people are less capable of recalling dates than there is any necessity for. We remember an old man recalling an anecdote which occurred many years previously, and he spoke with rapidity, saying that on the 6th of October, 1806, he started from Coxsackie, on the west bank of the Hudson River, in the sloop "Mary Jane," for New York, where he arrived on the morning of the 12th, having had a long and weary passage. When he had stated the date of start-

ing, the name of the vessel, the location of the place of embarkation, and the time of arrival at the destination, I was prepared to believe anything else which the man might say. Why did I value the peculiarity of that statement? Because the elements were in me to do the same thing, and they responded promptly. From that hour I commenced to think of dates, of the time when events occurred; and in my short history I managed, by the aid of friends, to fix the date of each important event, and for fifty years I have been cultivating and using that faculty assiduously. For several years, while traveling and lecturing, I kept a diary, recording every date, and the facts, scenes, and circumstances worth remembering connected with each date; and to-day it would not be difficult for me to go back thirty-five years, and by memory pass through a year's travel, telling the day of the month that the journey commenced, giving the places visited in succession, and some date which occurred while each course of lectures, covering a week or two, was in progress. Now, when a particular date occurs, my mind readily flies back for thirty years, recalling where I was and what happened on the corresponding day in any previous year. Chronology is a pleasure to me, and it is not difficult to carry the time of the day in the mind, and when I have not looked at the watch for five hours, I generally think of the time before I look, or mention it to friends, and frequently get within five minutes. Awakening at night, it is uncommon for me to be an hour out of the way in estimating the time. And in taking care of a sick friend I have slept soundly from hour to hour, rising each hour, for seven hours, and varying but three minutes each hour, and singular to state, the hours were sixty-three minutes long all night, so that there was a loss of twenty-one minutes in the seven hours. That might be accounted for, perhaps, by the fact that weary watching for two or three nights before had

exhausted the system, so that it seemed to require sixty-three minutes to make an hour.

This faculty may be cultivated by talking about dates in the family, or in school. For instance, if we had a class of fifty pupils, we would request them to find out the day of the month and the year they were born, and that should be a lesson which each one should put on the black-board. In New England there would be no objection to this, because there the age of persons is talked about, in school at least, as much as the name, and understood as well; but for some reason, South and West, there is a hesitancy of the people to talk about their age. We never suppose that they have forgotten it themselves. Each person can remember the age more readily by recalling the year of birth than by keeping an account, so to speak, in the head; and this would serve as a corrective in case of forgetfulness. We often hear people say: "I am forty-one or two," and hesitate about whether it is the one or the other. We have noticed that Irish people rarely know their ages. A man will tell us that he is twenty-five or six, perhaps twenty-seven or eight. He can not tell his age, though he will tell us that the name and age are recorded in the church-record; but that may be 3,000 miles away. We once asked a gentleman of Irish birth, when conversing on the subject, why it was that Irish people seemed not to remember their ages as well as other persons, and he instantly replied that he thought it was because "*the most of them* were so young when they were born that they did not recollect it." We accepted his explanation, and never have had much doubt on the subject since; but we still insist that the faculty of Time should be cultivated.

PUNCTUALITY.

Those in whom the faculty is strongly developed, if they have energy, will always be punctual—they will rise at a

particular time and insist on having their meals at the proper time. They get very hungry as the clock approaches the hour of breakfast, or of dinner. They will be sure to be at the station before the train comes; they never lose a boat or miss a train if they know the distance and the time when they should be at the place. They will be prompt in commencing to lecture or preach, and will open the meeting at the tick of the clock, whether the people are all there or not. This waiting to commence the school, or the church-service, or the lecture, or concert till people tardily come in, is a great mistake. Some ministers are in the habit of commencing service half an hour after the appointed time, and the congregation becomes slack about assembling. Janitors tell us, when we travel, that half-past seven means eight o'clock in their village or city, and we respond that half-past seven with us means half-past seven *sharp*. They generally reply that we will not obtain our audience before eight. In some large cities like New York, where people live a long distance from their places of business, and must needs close the duties of the day, and spend from half an hour to an hour in reaching their home, then take their evening meal, and, perhaps, have to go a mile and a half to reach the nearest place of entertainment, eight o'clock is the proper hour; but in a compact country village, where people can walk in five minutes from their business to their home and back again to the lecture-room, there is no necessity for waiting till eight o'clock, and we have always proved to the janitors and to the community that people will come just as well at half-past seven o'clock, and have the house filled, still, and ready for the speaker at the tick of the clock, as to be strolling in and disturbing everybody for three-quarters of an hour. Hence, the moment the advertised hour came we would commence to lecture, if there were no more persons in the hall than there were in Noah's ark, and when

the straggling auditors approached, and heard the ringing voice of the lecturer through the almost empty hall, they hurried to get seats. The first evening, for three-quarters of an hour, the people were coming to the lecture, but it went on without regard to the late-comers. The next night the house would be nearly filled, and the third night full, and quiet, and ready for the speaker at the proper time; and for the next nine nights there was no need of waiting. Of course, it must be a cardinal rule of the lecturer to be on time when he has trained his audience up to it, and many a time we have lectured without supper, because a pressure of professional business had prevented taking it in season to reach the lecture-room at the proper time.

Then consider how much more persons can do by being punctual and periodic in the matter of time. Some people, having but a feeble development of the faculty of Time, if they endeavor to dance, will drag ; if they sing in a choir, they will be behind time; if they march, they fail to keep step, and they annoy everybody who is better endowed in this respect than themselves.

In the study of history it would be of great benefit to the pupils, if they could be trained in such a manner as to remember dates. We have noticed grave errors in the conversation, and sometimes in the public lectures of persons, who, in speaking of historic characters living a thousand years apart, would transpose them as to their time of living. Sir Boyle Roche was a member of Parliament, when it was proposed to do something for posterity, and he angrily asked : "What has posterity done for us?" We suspect he was not too strongly developed in the faculty of Time.

We would not recommend arraying a long string of dry dates merely, but there is no reason why pupils who are studying history in which Cæsar, Charlemagne, Frederick

the Great, and Napoleon figured, should not be able to tell when each of these men was born and when he died; to wit: Cæsar born B.C. 100, died B.C. 44; Charlemagne, A.D. 742–814; Frederick the Great, 1712–1786; Napoleon, 1769–1821. If these and other important dates can be fixed, they will be focal dates for the dividing up of history, and seeing the influence which one great era or actor in a given era, had upon the affairs of the world. Men are careless in this respect. We knew a man of good sense in matters of general concern, who talked about the Fourth of July or Independence-Day as an abstraction, and spoke of it as one might speak of Easter or other movable feast. We had other festivals during the year—the annual election, which took place on the third Wednesday of May; and Thanksgiving, which occurred when the Governor thought proper to appoint it—and the man innocently asked when the Fourth of July occurred this year? A person present, with more Mirthfulness than Conscientiousness, said he believed it came some time in October; and the man replied that he had not yet heard when it did occur. This seems absurd, but persons make as ludicrous reference to historical matters which cover centuries as this one did in reference to Independence-Day. We believe that women generally remember dates better than men, unless the men are book-keepers and have occasion to write the date; frequently, however, they count by weeks, saying that it is "eleven weeks last Wednesday" since something happened; but we accept their method if we can not get a better, though we believe the day of the month would be the better method to indicate the date. Perhaps we think so because we have never learned how to keep time by weeks. We can take in three weeks, but eleven, thirteen, and fifteen weeks are too much.

When we see little girls jumping the rope on the street, we notice the difference in their success, and fancy that the

faculty of Time aids one to jump just at the right time and not too high, so that she can count 250 jumps; while others jump too early and too high in order to be sure to clear the rope. These get tired in fifty jumps. Some, in fact, are so dull in respect to time that they can hardly jump the rope at all. When a little girl is waiting for a chance she will make motions to get in time with the swinging of the rope, and then she jumps in. Another, in whom Time is weak, will imitate others in this respect, but does not keep time, and, therefore, fails to go in properly, and the rest grumble, and call her stupid, and will not let her play.

In marching, dancing, keeping time in walking, in filling appointments, in being ready with meals and at meals, the faculty of Time is a great aid in respect to convenience, pleasure, and profit. A man who is punctual as to time will never be poor and unprosperous, and will deserve to have hosts of friends.

THE FACULTY OF TUNE.

THE organ of this faculty is located outward and backward of the external angle of the eyebrow and the external angle of the eye itself, just under the "temporal ridge," speaking anatomically, back of the sharp, bony point at the outer end of the brow. When the organ is large, it fills up and gives plumpness to that region; in those persons who have it large it may be felt by a pressure of the thumb on one side of the head and the finger on the other. It is not so easy an organ to determine in regard to its size as some in consequence of its location. Its most important function is that which relates to music; but this is not the only function which it subserves. Many people are gifted in the production of a succession of musical

sounds in what are called tunes—some we have known who did not possess the ability to learn a tune, or remember that succession of harmonies and melodies which constitute a tune, yet they had enough of this faculty to enjoy music when performed by others, to appreciate musical sounds, and also to speak with that modulation of voice, and with those tones which are desirable in speaking. Those who have the best musical ear, as it is called, and the capacity for vocal music in the highest degree, will have richer and more flexible intonations in conversation than other people. They can give any shade of sound, any quality of tone from the most delicate whisper of love to the most fierce and denunciatory execrations. They can suit the sound to the word and the action.

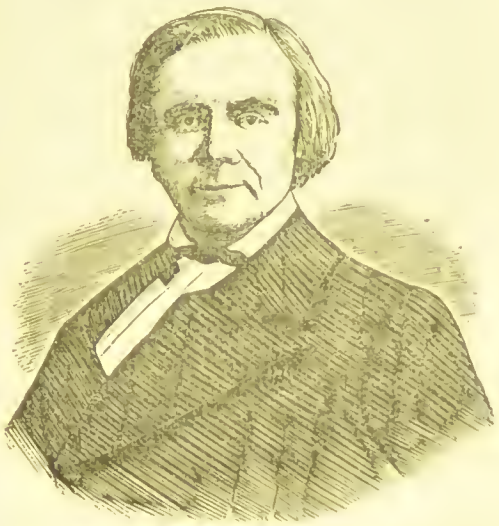


FIG. 25. OLE BULL. Time and Tune Large.

ELOCUTION A PHASE OF MUSIC.

The elocutionist requires the organ of Tune well developed. We have known one or two who attempted to study and teach elocution who were unable to understand or appreciate music, and there was a drawling monotony and a grating harshness to the voice, a lack of that liquid flow of tone which a good speaker requires, and which is especially essential in the teacher of elocution. A literary friend of ours happened to be in a house in one of the old

towns of Virginia. The family had been one of wealth and culture for several generations. While waiting in the parlor he heard a female voice in the hall, which was so musical, rich, and sweet, and having such grace and accuracy of intonation, that he was impelled, in defiance of his sense of courtesy, to step into the hall where his hat was hanging, for the sole purpose of seeing the one who could talk so sweetly, and there he saw, to use his own phrase, "one of the blackest women he ever beheld." She had been a maid-servant in the family, as had also her mother and, perhaps, grandmother before her. The conversation had been learned from the cultivated ladies of the household, and she had copied every tone by means of her musical faculty, and having large Language and Eventuality as well, she had remembered the words appropriate to polished conversation. Of course, her range of conversation was limited, but her words were well-selected and her modulations charming.

A SINGULAR SURPRISE.

We remember to have heard a popular song while staying at a hotel many years ago. On a bright summer's day we were sitting in one of the front rooms. The windows were open, and in the extension part of the hotel the women of the household were occupied with their affairs. It happened to be ironing-day in the family, and two voices were singing the soprano and alto of a new and popular song; and the alto was particularly captivating to my ear. I resolved to see who possessed so fine a voice, and in walking toward the stables, passing the kitchen, I saw that the owner of that rich alto voice, so full of the inspiration of the theme, was almost as black as the face of the woman in Virginia which my friend described. He had expected from the voice beauty of face, and I had also looked for many natural graces; but found it to be true in human as

in bird-nature, that it is not always the finest bird that sings most sweetly.

FEW CHILDREN IDIOTIC IN MUSIC.

We would have all children trained to sing, except those that are idiotic in this respect, and such are very scarce. If more pains were taken in educating the human voice, both to sing and to speak with grace and melody, there would be fewer persons found at mature life unable to entertain themselves and their friends with music. There is no reason why people should talk harshly, why there should be no more to language than emphasis, loudness, and rapidity. Every animal has natural modifications of voice. Everybody knows the difference between the cooing of affection and the harsh, threatening voice in the lower animals. The fierce growl and bark of the dog when he is angry, and would menace the approaching enemy, is one thing; and the joyous barking of the same dog when he sees his master getting ready to take him on a pleasant journey, is quite another, and though it may be of equal loudness, there is a world of difference between the sounds.

MEMORY OF PERSONS BY VOICE.

Some people remember voices, and by hearing the voice of the son of an old friend will recognize it instantly, and call out for the man by name, greatly to his astonishment that the gray-haired stranger should know and call him by name. Some people are very expert in knowing where strangers reside, or where they learned to talk, by their intonations and their pronunciation. We do not now speak of what is called the "brogue" of a language, but of those little, delicate peculiarities of voice not amounting to a brogue. We remember a young man who came to our office for an examination, and at the close of it we remarked: "You are an Englishman?" "Yes." "From the neighborhood of Leeds?" "Yes." "About six miles

from there?" "Yes." And he inquired why we knew, and we told him that we knew a gentleman by the name of Joseph Barker, whom we had talked with for an hour or two about seven years before, whose speech was like his own; and the young man responded: "Yes, he used to be my preacher."

The sense of sound, or a knowledge of the quality of noise, is so acute in some men that they will know not only the barking of their dog, the neighing of their horse, the crying of their child, but all sorts of other noises which have peculiar quality. We knew a livery-stable keeper who would sit in his office on a summer evening and listen to the approach on the country-road of the dozen horses and carriages of his that were rented out, and he would know the rattle of every wagon and the footsteps of every horse that were his; and on one occasion he started up and asked what carriage a horse he called "Tom" was sent out with; and when told, he said he could not make out how it was. He knew the rattle of the wagon and the sound of the footsteps of the horse, but as that horse was never allowed to work in that wagon, it was a puzzle to him; but when informed that the wagon that belonged to "Tom" was out, and that there was a necessity of driving him in another wagon, it explained the matter. Everybody who is accustomed to machinery knows that an expert will go into a factory where there are looms and spindles running and rattling, enough to deafen a person not accustomed to the noise, and in the midst of a conversation with a friend will become abstracted and listen for some sound that is not quite the thing, and he will steer straight to it, though he may pass a dozen looms in going there, and find out exactly what the trouble is.

CLARA LOUISA KELLOGG.

We remember an interesting case of recognition by voice. Having been favored with the acquaintance and

the friendship of the parents of Miss Kellogg, the eminent vocalist, when she was five years old, and not having seen her for fifteen years, she came alone into our office on purpose for a written description of character, at the request of Mr. N. P. Willis, she being intentionally *incog* We finished the examination; and in the midst of a littl conversation which took place she dropped one word, and we instantly said: "Your name is Clara Louisa Kellogg?" She laughed, and replied: "How in the world do you know that?" We said: "Because no person in this world can speak the word 'July' as you speak it except your mother and yourself." When that word was uttered it was the first inkling we had who was the person under examination. Permit another anecdote respecting her, when she was five years old. It is this: She had often stood at the piano to amuse herself, and touched the keys from top to bottom of the instrument, and had thus learned each sound. Her grandfather, who was not a musician, was one day sitting at the piano in the parlor, while the mother and the child were in the sitting-room adjoining, and out of sight of the piano. The grandfather touched a key, and inquired of the mother, who was a fine musician, what letter or key it was? She hesitated a moment, and he continued to strike the key, and when she failed to determine it, the little girl, who sat in the corner of the room playing with blocks, as far as possible out of reach and sight of the piano, said: "Then, mamma, if you don't know that you don't know much!" The grandfather then said: "Which is it, my dear?" "Why, it is the white one between the two black ones." He then continued to touch different keys all over the instrument, and the child, still sitting out of sight of him, knew every key that he was touching, and this was before she had ever taken lessons in music, or knew a letter on the instrument; but she knew every sound and could locate it. It is not

a wonder to us that so sharp an ear as hers, at that age, should have enabled her to become one of the most accurate vocalists the world has seen.

FACULTY OF COMPARISON.

The name of this faculty seems a sufficient suggestion of its function. Its office is to compare one thing or thought with another, to detect resemblances and differences, conformity, divergence, relationship, similitude.

Dr. Gall remarks that "Tune may compare different notes, Color contrast different shades, but Comparison may compare a tint and a note, a form and a color, which the other faculties by themselves could not accomplish."

Dr. Spurzheim says: "The great aim of this faculty seems to be to form abstract ideas, generalizations, and harmony among the operations of the other faculties. Color compares colors with each other, and feels the harmony, but Comparison adapts color to the object which is represented; it will reject lively colors to represent gloomy scenes. The laws of music are particular, and Tune compares tones, but Comparison judges of music according to the situation where it is executed. It blames dancing music in a church, and it is opposed to walking with fine clothes in the dirt. It feels the relation between the inferior and the superior feelings, and gives preference to the latter It presupposes, however, the activity of the other faculties, and can not act upon them if they are inactive."

This explains why some persons have taste and good judgment in one case and not in another. Mr. Combe quotes Mr. Scott as saying: "This faculty compares things of the most opposite kinds, draws analogies, and discovers resemblances between them that are most unexpected and surprising. It compares a light seen afar off on a dark

night to 'a good deed shining in a naughty world;' it compares the kingdom of heaven with a grain of mustard-seed. The kind of resemblances which this faculty discovers are, perhaps, in no case *direct* resemblances, such as are produced by the observing powers, but *relative* resemblances; or to speak more accurately, not relations between the objects themselves, but between their relations to other objects."

Those who are often using metaphors, parables, fables, and analogies will be found to have the organ in question largely developed. It is situated in the upper and middle part of the forehead, and when it is large, it gives a sharp and wedge-like appearance to that part of the head, and length from the opening of the ear to the location of the organ. It gives to the speaker or conversationist a tendency to think pictorially and to speak picturesquely. It leads one to make free use of symbols, and to draw illustrations from the whole natural and moral world. These comparisons are sometimes very quaint. Mirthfulness may have its hand in the work. The caricaturist is greatly aided by this faculty in making resemblance enough between the picture and the original so that everybody shall know it, and difference enough so that every one shall laugh at it.

Order and Comparison work together. It is the order of nature that certain fruits should grow on trees, and cer tain other things in the ground. When one sees a chestnut, if he has ever seen chestnuts grow in nature, he will instantly infer that the chestnut before him grew on a tree similar to that which bore the chestnuts that he has seen growing. He would say the same of a grain of wheat or an ear of corn. Individuality, Form, Size, and Color would recognize the peculiarity of a given scale of a fish, and Comparison would enable one to know to what fish the scale belonged. Professor Agassiz, being shown a fossil scale of a fish, drew the fish and put that particular scale where he

inferred it must have belonged, and published the drawing. A year or two afterwards a complete fossil fish of the same species was found, and by comparing the drawing and the complete fossil, it was found that in form, size, and in all the characteristics the critical professor had scarcely varied a line from the reality.

Men who have this faculty strongly developed are critics. They make nice distinctions; they argue sharply; they compare one thing with another, introduce metaphors and similes, and thus bring the subject vividly to the comprehension of the hearer. That wonderful parable of the sower, in which the kingdom of Heaven is likened unto one who went forth to sow, is a happy illustration of comparison. Some of the seed fell on good ground and brought forth fruit. Some fell on stony ground; some by the wayside, and some among thorns and briers. The explanation of this parable makes the subject exceedingly interesting and very appropriate, and the faculty in question recognizes it.

Analogical reasoning comes from the faculty of Comparison, while that which is called abstract and philosophical is supposed to come from, or originate in, the faculty of Causality.

CAUSALITY.

THE BASIS OF THE REASONING POWER.

This faculty is located in the upper part of the forehead, outward from Comparison, and when large, it gives a peculiar squareness to that part of the forehead. Its name would seem to imply that it has to do with causes, seeks for causes, and appreciates them. When it meets with an effect it reaches backward to know the cause, or onward to calculate the effect or result. If a person in whom Causality is large, be placed in unusual circumstances, he instantly

casts about to see what he shall do, and will invent methods of retrieving himself. Causality invents plans, looks forward, anticipates the future, studies the philosophy of facts and the relation of causes to effects.



FIG. 26.—CAUSALITY AND COMPARISON LARGE. Adapted to Theories and Ideas.



FIG. 27.—CAUSALITY AND COMPARISON SMALL AND THE PERCEPTIVES LARGE. Adapted to Details and Practical Affairs.

Superior inventors generally have Causality large, and they will sit with their eyes shut and dream out wonderful results, but they may require a person with large perceptive organs and Constructiveness to reduce the theory or idea to practice. Causality comprehends the principle, and Constructiveness helps to work it out. Causality plans the means for making the tools for new uses, where none were existing; in short, Causality grades the road and lays the track, while the other faculties run the train.

Among writers, the possession or deficiency of Causality will be marked in their productions. A man with Individuality, Eventuality, Language, and Comparison, might be brilliant in narrative, but would be barren in the domain of causes and philosophy. Another will be dry, sound, theoretical, and give the germinal thoughts, which are like seed-corn more than like the harvest. We have known

some phrenologists with large Causality and moderate perceptives, who were very dry in their lectures and examinations, but they were sound in their conclusions. If we may say it, there was no marrow under their tongues.

There are teachers who, with large reflective organs, brood over a subject and comprehend its length and breadth, but they can not utter it in such a way as to make it available to those of a different cast of mind. Their method of instruction to those who are not sharp in abstract studies, but strong in perception, is very much like feeding whole corn to little chickens. The material which composes the corn is just what they need, but it must be ground before they can get it down. Those who have the same philosophic cast of mind can understand abstract subjects; they are like the full-grown fowl, able to swallow the whole corn. But the teacher, or the preacher, who would instruct a congregation, the old and the young, the cultured and uneducated, the theoretical and practical, must learn to reduce his philosophic depth of thought to familiar forms of statement; in short, must learn to grind his corn, and then it will become food alike for young and old.

This faculty is supposed to give one the idea of the existence of God, on the principle that everything must have a cause; but another faculty gives the emotion of reverence, and though we can not look around us and see anything which is our superior, we have a yearning sense of something above us, and the faculty of Causality seeks to appreciate the cause of light and wisdom as being one of creative and controlling power Causality comprehends the adaptation between a powerful and intelligent cause and the results which the other faculties appreciate. Causality concludes that a Creator "must exist, and must possess the attributes which are evidently manifested in His works; and since all these attributes merit our respect and

admiration, therefore He is the most legitimate object of our veneration and worship." But he must have Veneration to give that direction to his reasoning powers.

The teacher who has this organ large, or even fairly developed, will have abundant occasion to exercise it in the explaining of causes and reasons respecting the lessons under consideration. Parents find out that their children want to know who made this or that, what was the cause of this, and why it is so; in fact, many persons are driven to the wall by the intense questioning of their children, showing that Causality is active in them, and that it demands reasons and explanations. So far as explanations can be made, children in the family and pupils in the school have a right to receive them, and we pity the teacher or the parent who is not able to answer most of the questions which are awakened in the minds of the pupils.

Those in whom this faculty is strong will learn to remember things by the principles involved. They may not have remembered the facts, the details, the particulars, but the logic, the philosophy to which they point. It is like remembering a rule in arithmetic, but not all the problems that come under it. He who can hold the rule in the mind can work the problems; and other knowledge is held also in this abstract state. It is like leaven, which is capable of permeating the mass and reproducing itself forever.

NATURAL LEADERS.

When this organ is large, in connection with those of the other intellectual faculties, we have those prominent individuals who live in advance of their day, and who impress their greatness upon the coming generations. Not one man in fifty is remembered fifty years after he is dead; not one man in five hundred will be remembered a hundred years after he dies; but a few live in that realm of high mentality which enables them to become

leaders of thought and benefactors of the race, and their memory becomes more fresh and vivid as the recurring generations advance in wisdom and knowledge; and although, perhaps, we may count on our fingers the names of those who stand forth in the domain of scholarship and philosophy, who have been dead a thousand years, yet the appreciation and reverence of mankind for those "immortal names that were not born to die" shall become more intense and profound as the ages roll on.

Those who have to do with mere facts and things and never step out of the beaten path, or rise above the level of the common average, do nothing which gives them a claim upon the remembrance and reverence of posterity, because they live in the realm of mere things that perish with the using. Mind is immortal; morals are imperishable; philosophy sits serene above the strifes and tumults of the world; and when men are moved by enduring principles applicable alike to all generations, mankind will not willingly, and could not if they would, permit their memory to perish.

HUMAN NATURE.

Above the organ of Comparison, on each side of the center line of the head, is the location of an organ whose faculty seems to have a mid-way position between Intelligence and Sentiment. It joins to Benevolence on the rear, and Comparison on the front. Formerly it was considered as belonging to Comparison, and sometimes to Benevolence, or as being divided between them. We recognize it as giving a knowledge of character, and an intuitive sense of what men are.

Those in whom the organ is well-developed, and it is often more marked in women than in men, seem to read the

stranger at a glance, and understand intuitively who are good and who are not, who may be trusted, who should be distrusted. It is a kind of criticism which seems to be related to Comparison, and it also gives a sympathetic quality, or tendency, as if it belonged to Benevolence or worked with it; hence we say it seems to be the connecting link between Sentiment and Intellection.

It gives another quality than that of knowing abstractly what people are, namely, it seems to tell the adaptation, or the want of it, between us and others. Perhaps abstract knowledge of character would be sufficient to enable a person to appreciate whether there would be harmony between himself and the person he appreciates. The old Indian, who said he was glad that all men did not think alike, because if they did they would all want his squaw, expressed the feeling of preference which a person has for one who seems to be adapted to be his best friend. It is not all good people who are adapted to enjoy the society of each other, or to be proper companions or business partners.

QUEER PARTNERSHIPS WELL-ADAPTED.

This faculty helps me to appreciate those who are harmonious with me, or with whom I may blend and co-operate; those who may serve me in some respects, and whom I may serve in other respects, so that a companionship or partnership may be desirable and profitable to both. Men often relate themselves to each other apparently by accident. They are as unlike as they well can be, yet they seem to coalesce, each supplements the other's strength and weakness, and thus they are adapted to be partners. We remember one instance. A gentleman of New York came into our office for an examination. I wrote out his character in full, by dictating it to a short-hand reporter, and told him that he had so great a development of Cautiousness, and so much of the tendency to be philoso-

phical, and was further endowed with the Motive and Mental temperaments—having a dark complexion and a large head—that he would be known as a planner and a thinker, and more especially as an exceedingly cautious, wary, careful, cool, forelooking man in business, and that he ought to relate himself in business with a man of light hair florid complexion, retreating forehead, with a broad base of brain in the region of Destructiveness and Combativeness, and with moderate Cautiousness; in short, one of the real wide-awake, go-ahead, energetic men ; a man who would need the influence of all his watchful prudence, all his sagacious power of thought, and could wisely appropriate it and put it into practical use. In the afternoon of the same day a man came in asking also for a written description of character. He really had just the qualities of a man we had described as a partner for the thoughtful, philosophic, cautious man in the morning; and we remarked to him, that he ought to have one of the prudent, careful, dark-complexioned, square-headed men as a partner, who could plan, think, reason, lay out work, look ahead, and who would act as a kind of brake on his enthusiasm, regulating his course without stopping it. Then we added, that we had had that very day a man under our hands who would make just the right kind of a partner for him, and turning to our memorandum book, we gave him the name and address of the gentleman in question. When the examination was concluded, he informed us that he was the partner of that man, and that the statement as to the kind of partner Mr. A. should have, had induced Mr. A. to ask his partner, Mr. B., to come in and see what we would say of him. They work together harmoniously, though very unlike, each supplementing, or being the fit complement of the other, and the two together cover the whole ground. Each is well adapted and willing to do just that which the other does not wish to do. One is

quite at home in quiet, profound, and comprehensive plans and negotiations; the other takes the practical sides of the subject, and carries out the plans of his cool and sagacious partner.

In society people relate themselves to each other apparently according to queer fancies, but each is impressed, through the faculty in question, that the other has desirable qualities, and that intimacy will result in harmony.

HARMONY BETTER THAN UNISON.

The faculty of Human Nature, then, may enable a man to find in others, not perfection, but that which is needed; it may enable lemon-juice to find sugar, and *vice versa*. Men endowed with this faculty succeed better than others in the various walks of life. A man who is traveling to do business with merchants, if he be well-endowed generally and has large Human Nature, will read a man in walking five yards, and know whether to treat him with respect and distant courtesy, or whether to walk up and offer the hand cordially and familiarly, and he will address a dozen men in as many different ways in a given day, and if he could have a companion to watch his methods, that friend would get confused, and would wonder why he became "all things to all men," why he was grave, gay; lively, sober; deferential, familiar; free and easy, or reticent, "everything by turns and nothing long," changing his manner to adapt it to the nature and character of each one he meets. Our answer is, that his knowledge of human character enables him to read his men, and further, to adapt himself to each man's peculiar nature and disposition. A man who is in bank or store, or in a hotel or steamboat, or who is a conductor on a railway, and especially a teacher or lawyer, should be well-endowed with this faculty, and if he have also a good knowledge of the whole subject of Phrenology he will be able to comprehend men and make

himself successful in whatever course of action reason and duty may require.

AGREEABLENESS.

Outward from the faculty of Human Nature, and just above Causality, is located the organ of Agreeableness, or as it has sometimes been called, Suavitiveness; and it is useful in aiding people to become mellow in their manners, leading them to seek words which are gentle, soothing, and kindly. Perhaps there is no nation which possesses this faculty, by nature, more strongly than the Irish, and they give it, with its manifestations, the title of "blarney," and certain it is, that the roughest of them will sometimes express himself in a manner at once delicate, gentle, persuasive, soothing, smooth, in short, agreeable. They seem to know which way the grain runs, and act accordingly.



FIG. 28.—REV. D. BALLOU. AGREEABLENESS LARGE.

There is nothing deceptve, hypocritical, or wrong in its normal activity. A man who does not possess it will ask: "How long is it since we last met?" A man in whom it is large, will be likely to say: "When did I have the *pleasure* of seeing you last?" And that is a modest way, if it be true, of assuring a person that his society and presence give pleasure. Some persons have a great deal more of this element than others, and it is shown in a thousand kindly ways where no word is spoken, and it is also shown in expression of face. Most of our readers wil be likely to recall some person, neither learned, talented, wise, nor handsome, but who would make them feel easy and comfortable in his presence. On the other hand, some have worth, integrity, talent, wisdom, and skill, yet their

presence is a bore to us ; while one who is worthless in almost every respect will not seem to be in the way, but we are, on the whole, glad to have him come.

One well endowed with this faculty not only makes himself acceptable and agreeable to others in his action toward them, but he has the power to take smoothly the rude jostlings and assaults of life. If one carelessly runs against him, or steps on his toes, he blandly begs pardon, as it were, for being in the way ; and this brings an apology, a kindly recognition, and perhaps friendship or life. Whereas justice and spirit might have uttered a sharp response, ruffled the temper of both, and awakened a mutual and life-long dislike.

This faculty should be cultivated at home and at school. For it serves as a lubricator among people, rendering the hard attritions of life tolerable. When Lord Wellington, the man of iron resolution, was on his dying bed, his blandness and politeness, which had become such a fixed fact in his strong nature, did not fail to show itself. A servant asked him if he would have a cup of tea, which it was his duty to give him, the duke replied : "Yes, if you please," and these were his last words. Lord Chesterfield, the most accomplished gentleman of his time, was taking tea with two elderly ladies who seldom went into society, and who feared their manners would fall below the standard. They poured their tea into the saucer and drank from it, which Lord Chesterfield with kindly address repeated, lest the more approved method should act as a mortifying rebuke to his venerable hostesses. A smooth and kindly manner sets everybody devising means to make one happy, and though one neither give service nor things of value, an obliging, gentle spirit opens to him every door, every purse, and every heart.

He who carries sunshine in his face and music in his voice is a perpetual blessing to all who are fortunate

enough to come within the sphere of his influence. People feel happy in his presence, are rendered mellow in spirit, and are ready to respond kindly to any wish either expressed or implied. Verily, "a pleasant countenance doeth good like a medicine."

VITATIVENESS; LOVE OF LIFE.

Man and animals have an instinctive clinging to life. They dread that which will produce death. And this stands in the place of reason among animals to prompt them to avoid that which is dangerous to them. We have seen a young cow that had never witnessed the shedding of blood, on coming where blood had been spilled—perhaps it had been drawn for sanitary purposes from the mouth of a horse—when she would open her eyes and mouth with terror, and give such an unearthly sound as to show that she somehow appreciated the shedding of blood or the loss of life.

Some people have a yearning to live long. Some seem to care but little about it. Some commit suicide. We fancy they are those who are deficient in this faculty. He who is well-endowed in this respect will bear burdens, hardships, and all kinds of inflictions, and still cling to life. Many an invalid lives and suffers years and scores of years with hardly enough of constitution to last from day to day, who goes down to the borders of the grave and still comes up again, and lives to a good old age, and seems to live on a cent's worth of vitality and constitution. "I will not die" has prolonged many a life. Many good people who have no doubt of their own happiness in the future state, live in perpetual "bondage through fear of death." The physician who understands this faculty, appeals to it in the treating of his patients, and it responds wonderfully in aiding recuperation. It is, perhaps, one of the ele-

ments that make men yearn for immortality ; at least, it has a tendency to intensify that hope and faith which promise immortality.

ALIMENTIVENESS.

APPETITE FOR FOOD.

Although this propensity is instinctive in its action, it is not in the human being a sure guide as to what articles should be taken as food. If men live in a wild state without civilization and culture, and, of course, do not have access to the arts and appliances of cookery such as prevail in civilized countries, the instincts are more nearly correct than in those who have formed habits of indulgence, and have thereby more or less perverted the appetite. We imitate our seniors and thus learn by habit to use and to consider indispensable such unnatural articles as tobacco, alcoholic stimulants, opium, arsenic, and also to eat pungent condiments with our food, all of which articles would be repulsed instinctively by a person unperverted. When the lower animals are permitted to select their food without restraint, their instincts teach them what is wholesome, and they never make a mistake or eat poisonous articles unless they are driven to it by hunger and scarcity of food.

Alimentiveness is the first faculty that comes into activity ; it ministers to the first human want. It does this without thought or reason, but ultimately becomes ripened and instructed by experience and intelligence, which aid us in the gratification of this faculty by procuring appropriate means for it. If this faculty did not exist, hunger would be simply a state of uneasiness. Gustatory pleasure originates in the faculty in question. Sometimes the sense of smelling becomes paralyzed, and, we doubt not, if that part of the brain located just forward of the opening of the ear where Alimentiveness is situated were to become paralyzed, the sense of taste would be obliterated

During early childhood food must be prepared for the young because of their weakness and inability to provide it for themselves. If children could be fed on simple diet, and that of the right kinds, in their early years; if it were insisted upon that they should avoid whatever is wrong, and they did not have examples of perverted appetite to awaken in their minds a desire for that which is unwholesome, they might grow up to manhood with sound health and vigorous constitutions; certainly in all cases where they had not inherited tendencies to weakness or sickness from debilitated parentage. Health, in other words, is the natural state of man, but health is perverted in a thousand ways by wrong modes of eating and drinking.

WHAT THE SYSTEM REQUIRES.

The system requires for its support certain ingredients, and these can be ascertained, and if applied to the growing animal or child, normal growth and health will be the result. The calf and other young animals get nothing but milk for a considerable time, and that completely supplies every want of their bodies, and, therefore, may be called complete food. A pig fed on nothing but milk, if it were fresh from the cow, might be grown to its full estate to the weight of three or four hundred pounds, and never eat anything but milk, and his health would be undoubted and his constitution not only unimpaired, but perfectly developed. Certain animals live on wheat and other grains; and if one were to live on wheat alone, every tissue and element of the body would be built up harmoniously. Wheat, then, without being depleted by sifting, is in itself complete food, and will sustain health and vigor perfectly. Some of the lower animals, the lion and the eagle for instance, live solely on flesh meat; they seem to thrive; they are strong; they are long-lived. Certain animals, and among these monkeys, live on fruits, and, therefore, fruit

may be considered as covering the demands of nutrition, and is, therefore, complete food. Vegetables, including potatoes, peas, and beans, beets and other articles, will sustain life and develop persons to vigorous manhood. The same is true of fish. Animals live solely on it, and many tribes of men live on little else; and though it is not of the best character, it is complete food.

If all these articles of food were judiciously combined, or eaten alternately, complete nutrition would be the result. When, however, art comes in and skims the cream from the milk and makes it into butter, leaving behind some of the material valuable to the eater, that which they take, viz., the butter, is not complete food. It simply ministers to heat or warmth, but does not minister to muscular strength nor give support to the brain or bones. Sugar is another article which is a concentrated extract, and also ministers as butter and other oily matter does to the production of heat, but does not minister to muscular growth or strength, or to development of brain and muscle. The saccharine element is largely an ingredient of all grain, and when grain is eaten in its entirety, no part sifted out and cast away; when the starch, which produces heat and which contains the sugar, is eaten with the rest of it, it gives the required quantity of animal warmth and tendency to fatness on the part of the eater; but when the superfine part is used, separated from the other parts of the grain, its chief tendency is to produce heat in the system to an unwholesome degree. But people take this superfine flour, which is full of carbon, and mix with it butter, which has a similar chemical characteristic, and then add sugar, and the breakfast of griddle-cakes becomes a very imperfect means of nutrition; in fact, the system is rendered feverish, the liver is clogged, promoting biliousness and constipation, a disturbed condition of the circulation results, and the health fails. Uninstructed people following this course think they

nave lived plainly, and wonder why their health should fail.

Some people become undesirably fat and would do anything to lessen their weight. They eat sugar, butter, fatty matter, and breadstuffs. Let them remember that every animal whose food is grain becomes fat if he has enough to eat, and that no animal which lives solely on meat ever becomes fat. A fat lion or eagle is yet for the first time to be seen. If fat people would avoid everything in the way of grain, oily matter, and sugar, and live mainly on lean meat, their surplus fatness would leave them, while health and strength would remain.

Moreover, people teach themselves the habit of using condiments which would draw a blister on the back of the hand if applied, such as mustard, pepper, Worcestershire-sauce, catsup, and chowchow, not one of which articles an unperverted animal would touch. If it were to be applied to a child's food, it would be amusing and instructive to see what wry faces it would put on ; but let the child watch his parents and associates and he will learn to desire pepper, mustard, and vinegar like the rest, and in five years he will acquire the habit of eating these things with avidity, directly against the instincts of his nature, just as he would learn to use tobacco, opium, or alcoholic liquors.

It is said, and truly, that people in civilized countries dig their graves with their teeth. We believe if a generation of people could be brought up on simple yet nutritious diet—we call beef, wheat, potatoes, fruit, milk, vegetables, fish a simple diet, but cakes, mince-pies, meat eaten with condiments and seasoned with lard and butter, we do not denominate simple food—the standard of health would be increased forty percent., the standard of strength, endurance, and power, mental and physical, might be increased in an equal degree, and the duration of life receive an addition of ten to fifteen years ; if we were to say twenty-five, it would probably be nearer the truth.

GOVERNING THROUGH APPETITE.

We regret to see parents and nurses appeal to the appetite of children as a means of governing, managing, and restraining them. They promise to the already excited appetite some choice delicacy, something the appetite has learned to crave, with a view to subjugate the turbulent faculties of the child to obedience. We hear nurse-girls, as we pass along the streets, saying to the little one in the perambulator, "Be quiet, now, and don't fret, and I will buy you some candy when I get to the corner."

Children, in point of fact, ought to be fed at regular intervals; even a nursling should have set times for taking his food, and children readily become habituated to that order. So long as the child's Alimentiveness is petted and fostered by all sorts of indulgences at meals and between meals, that part of the brain, it may be expected, will be in a continuous state of feverishness, the digestive system will become perverted, the growth and health will be impaired, and the child will enter upon manhood with a craving appetite and a thirst for abnormal articles of food and drink, and is it wonderful that there should seem to be such wide-spread intemperance in the very constitution of human beings?

INTEMPERANCE TAUGHT IN THE NURSERY.

The gustatory habits of children lay the foundation of all the future intemperance which makes the race mourn. Three-fourths of the crimes in our large cities originate in the perversion of appetite. Tobacco excites the nervous system unduly, and alcoholic stimulants pervert and degrade the constitution until men become maniacs and murderers. Children sometimes inherit from parents who have been badly trained in body, tendencies to these abuses; and what may reasonably be expected from the children of parents who have been ignorantly drugged by tea, cof-

fee, tobacco, and alcoholic liquors, or surfeited with rich, unwholesome, concentrated diet? So long as thousands of people think that some sort of stimulant is essential to health and comfort, so long drunkenness and violence will scourge the human race. People who pervert their Alimentiveness in regard to food become dyspeptical, break down the tone of their digestive system so that they can not convert enough of food into nourishment to sustain the brain and body.

INTEMPERANCE NOT CONFINED TO ALCOHOL.

The use of alcoholic stimulants, however, acting more noticeably, sets the nervous system on fire and makes man a maniac, a demon, or a fool. Its effects are much more palpable than those which arise from other forms of intemperance, but those just as surely sap the foundation of health if indulged in to excess as do alcoholic stimulants. Almost everybody now complain of dyspepsia, or of a torpid state of the liver, of palpitation of the heart, or what is called nervousness, originating in some wrong indulgence of appetite, the ultimate effects of which are irritability, despondency, loss of memory, insanity, and death in various ways.

Notwithstanding tens of thousands of our countrymen have discarded the use of alcoholic stimulants, we are still a very intemperate people. Many, to be sure, have given up the bottle, but have only changed the form of stimulant to coffee, or tobacco, or both. We remember listening to an eminent temperance lecturer, who, the moment he got back to the hotel, filled his pipe with strong plug tobacco and smoked and talked for three long hours, reloading his pipe several times. We inquired why he did so, and he remarked that having given up the use of liquor, which he had taken in excess, he felt that he must have something to keep his nerves braced up. Years afterwards

he relapsed into the habit of drinking, and died of *delirium tremens*. He changed the habit, but did not reform the perverted appetite, and his relapse was a very natural consequence. As a matter of health, it is difficult to say which is the more dangerous process of the two. Smoking may not make a man neglect or abuse his family, yet it sends thousands of men to untimely graves. Nearly all who use alcoholic liquors use tobacco, and the two habits combine to ruin health and to produce a shattered constitution, if not early death. If a man who has followed these two habits fall untimely, the alcoholic liquor is charged with the homicide, while the tobacco has, perhaps, been an equal factor in the sad work.

TRUE, THOUGH STARTLING.

We suppose these statements will startle many a gentle, loving mother who is not aware that she is training her children to some form of intemperance by nursing or feeding them every time they are fretful or uneasy. We know many mothers who carry cakes, candies, and the like in their pockets wherever they take their children, and when they are restless or worry, a cake or a piece of candy is brought forth to allay their restlessness. Thus treated, it is easy to understand how an unnatural fever is produced in the digestive system, and also in the brain, which governs that department as already mentioned. With such early training, is it a wonder that when they grow to maturity they eagerly seek for some stimulant or exeitant, and thereby break down their constitutions and their morals together?

THE WAY TO CURE IT.

A few simple rules for the training of the faculty of Alimentiveness may be of service. For the first year of a child's life, its mother being healthy, nature has provided for it the best food, and, so far as possible, this should be

given to the child at stated periods according to is constitution. Nursing a child every time it appears restless will induce an unhealthy condition of the stomach. It can easily be understood how raw food introduced into the stomach when that which it contains is half-digested shall break up the order of healthy digestion and produce sourness of stomach. Suppose a bread-maker were to mix up a batch of bread and let it begin to rise nicely, then introduce half as much more cold water and cold flour, and mix it, and by the time that began to get into condition to rise, another parcel of flour were brought and stirred in, that which constituted the first batch would by that time begin to sour; chemical change would have taken place. Apply this thought to the stomach and it will be useful as a suggestion. Food thus mixed in various states of change becomes noxious, and there are very few children thus fed who do not become irritable, feverish, and dyspeptical. When a child is older, and is weaned, it should be fed upon a plain diet in general, not such as people of mature years partake of. In England, Scotland, and Ireland children are fed upon oatmeal porridge, or milk thickened with cooked oatmeal or wheatmeal, and vegetables of various kinds. Bread made of unbolted wheat, or cracked wheat, pea-soup, with the lean part of beef and mutton, constitute a good diet for child or man. Plain beef, Graham bread, milk, and fruit will make children grow; and if trained to it, they will like it better than the ordinary mixed diet in the United States. We often see children two years old making a meal of roast beef and plum pudding, or ham and eggs, and parents often remark that their children ought to and shall live as well as themselves. But the parents ought to live correctly. By that they mean that their children should drink coffee and eat fat meat and highly-seasoned food; and we have seen many a child two years old, in the lap, eat all these things. Children should

be brought up to eat but three meals a day. A child four years old may, perhaps, eat five times, but at the age of six or seven three times will answer; and children should not be fed within two hours of their time of retiring.

The proper education of this faculty is a matter of great importance, and it may be educated by the training of the judgment and intellect. If children be taught through their caution and reason that the eating of a certain article will make them sick, as sometimes by sad experience they have learned that it will, even a child, a selfish little animal, will rise above the temptation and cast it away. But habits of the right kind will train this faculty to normal activity and to seek and desire that which is proper and best. If all the faculties in the mental constitution were as badly abused as the faculty of Alimentiveness, the doctrine of total depravity would be accepted by every one, and would need no further illustration or proof.

We have elsewhere hinted that students in school are not provided with the proper kinds of food, nor are they trained and instructed in reference to that which is best for the system, so that their appetites, fierce and unregulated, clamor for that which is detrimental. They have no instruction which enables them to fortify the will and the judgment against mere animal indulgence in the pleasures of appetite which have been badly trained and cultivated into an unnatural condition. We may form bad habits by using articles of food which are generally considered desirable, just as effectually as we can form bad habits through the use of opium or alcoholic stimulants; and one of the best means of attaining to a state of temperance, and an abhorrence of that which is noxious, is to train children from the cradle up to maturity to eat and drink the simple articles which in themselves are nutritious and adapted to the right development of every tissue of the body in a normal manner. People to-day, if

they could eat their meat without the pepper, and think the seasoning not desirable, avoiding it for the next twelve months, they would after that time repudiate it if applied to their food. A man may use tobacco for twenty years, and, by quitting it, he may in two years come to detest it as thoroughly as any delicate, blue-eyed girl. The same is true of all the other condiments that are unnatural. Few persons know how clean, uncontaminated food tastes which is adapted precisely to their constitutional development. This making meat white with salt, black with pepper, red with Worcestershire-sauce, or yellow with mustard, so thoroughly disguises the taste of the meat that one might eat anything all the way from buffalo-beef to venison and not recognize the difference, tasting only the condiments. Some one has said : "Let me write the songs of a people, and I care not who may make their laws." I might add : Let me feed a people, and I will lessen the crimes and diseases of that people by ninety percent., and enhance their happiness immeasurably.

ACQUISITIVENESS.

HOW TO TRAIN IT.

MANY a boy feels too restless to study who might be incited to effort, especially in the direction of arithmetic and its application to accounts and money-making, if he could have his Acquisitiveness, or sense of property, rightly appealed to. The organ is located upward, and a little forward of the opening of the ear, pretty nearly on a line drawn horizontally from the top of the eyebrow backward ; and when large, it gives wideness to the head, just back of the temples ; but as the reader of this work is expected to know the location of the organs, by studying the analysis of the faculties and their location, as found in the back

part of the book, the teacher can readily understand by looking at heads, who have large Acquisitiveness and who have it deficient. If a boy be taught that he must learn to keep accounts, and consequently must study arithmetic, if he would secure success and standing in the world, it will hav a tendency to curb his wayward fancy, bring him down to his work, and give him a relish for it, since he is thus made to see that he can make use of it.

Girls sometimes say: "Why do I want to study mathematics? I am not to be an engineer. Why should I study navigation? I am not to command ships." A Boston girl, perhaps stimulated by the fact that she loved a young man who was following the sea, became interested in the study of navigation, and mastered the science. When doubling Cape Horn, her husband, Captain Joshua Patten, having put in irons his Mate for a crime, and thus having double duty to perform, was stricken down with brain fever, and there was no one but his young wife left on shipboard who understood navigation, and she carried the clipper-ship "Neptune's Car" safely into San Francisco, in 1856, and was awarded a gift of a thousand dollars by the New York Board of Trade. This proved that a girl can learn navigation, and put it into practice. This fact lays the foundation for our point that boys who love money, and have a desire to acquire property, may be laudably stimulated to study by an appeal to the faculty of Acquisitiveness. Boys are sometimes so fond of trafficking that they want to be playing pin on the sly, or swapping knives, or marbles, or something else, during school hours, who might have this money-making, property-getting tendency so stimulated by a proper appeal as to induce faithful and thoroughly interested study.

The study of geography as a means of understanding where coffee, spices, logwood, oil, wool, and other commercial products are produced, may be made interesting

if a boy thinks he is going to be a merchant, perhaps a grocer. Those examples in his arithmetic that relate to sugar, molasses, rice, and other articles with which he is familiar as belonging to a stock of groceries, will give him a fresh interest in working out the problems, just as a boy who has an idea of becoming a dry-goods dealer will work problems relative to bills of goods, yards, pieces, and bales of silk and muslin, if he be made to feel that he is to handle these things, buy and sell them, estimate their value, and the laws of profit and loss. In relation to trade and commerce, why will not this acquiring feeling stimulate intelligence, and patience, and effort in the direction of scholastic attainment? But when the teacher takes the rod, or frowns upon a class of restless boys, and tells them to attend to their books, and work out their problems, or he will keep them after school, he may excite their fear, he may also excite their hatred both of himself and his school, and strengthen their desire to go away from school and go to business. But by right encouragement, in the proper direction, the boy will feel that while he is learning arithmetic and book-keeping, and the law of values in school, he is preparing for higher success, and is really learning then and there to be a merchant and a business man; that he is pushing business faster than he would be in the working department of business; in other words, he is grinding his axe, the school being the grindstone, preparing himself to hew his way to success, grandly.

The love of property is an instinct of human nature, and forms a distinct quality of mind and character, as much so as the appetite for food, or the impulse of anger, pride, or ambition. Animals which are located where they can obtain food for every day, without laying it up, are not endowed with this faculty; and men who live where perpetual summer reigns are very weak in the development

and manifestation of Acquisitiveness. The African who lives in a climate so warm that he does not need a house, or clothing for his comfort and protection, and where he can reach up and pluck the fruit which will serve all the purposes of nutrition, does not work to acquire and lay up things of use; on the same principle that he who has a living spring within easy reach of his door, does not dig wells, or build cisterns, as people differently situated are obliged to do at great expense. In the city, he who has a faucet in each room of his house, would not have a man introduce one or ten more, if it could be done gratuitously and without damage. So the African in the torrid zone, whose wants are supplied by nature, does not put forth ingenuity to construct, or Acquisitiveness to gather and save.

ACQUISITIVENESS IN SOME ANIMALS.

The nature of this faculty will be thoroughly understood by reference to the habits of certain animals. A hen loves corn, and if she finds a quantity of it on the ground, she greedily devours all she needs for the time being, and walks away without any care as to what remains. A squirrel, discovering the corn as the hen left it, does not stop to satisfy his appetite. He fills his mouth and scampers off to his nest, returning and reloading, until every kernel is nicely stored away for future use; then, and not till then, does he satisfy his hunger. By that time the hen, becoming hungry, would return for her supper, and manifest astonishment that the corn had disappeared.

The squirrel has Acquisitiveness, the hen has not. Birds gather material with which to build a nest; they seek food and carry it to their young, but this instinct is prompted by the love of young, not by Acquisitiveness. If the hen, and other birds that feed on grain, had the instinct of Acquisitiveness, they would lay up food for winter as

the squirrel does. They could gather food for a winter's store as easily as they can gather food for their young, or material for a nest.

As men acquire property this faculty becomes very influential. Since the possession of property furnishes means for display, lays the foundation for power and influence, and for the procurement of works of art, for the gratification of taste, Acquisitiveness becomes a servant of all the other faculties, and it would be strange if it did not sometimes become perverted in its development as well as in its exercise. Those who have become rich have a growing desire to get and keep. A man who is worth a hundred thousand dollars begins to feel the power of money, and a desire to acquire another hundred thousand. Then Approbativeness, Hope, and Self-esteem stimulate him to crave a million. John Jacob Astor said that the acquisition of the first thousand dollars was the great trouble. After that he acquired ten thousand easily, and then more easily a hundred thousand, and then a million; and after that money-making was simply a matter of course.

The primitive object of this faculty is to lead men to industry and frugality, that they may acquire the means for sustenance and comfort, and lay aside the surplus earnings during the season of youth and health for the period of sickness or old age. It is doubtful whether it is best for children that their parents amass large fortunes, for it thus removes the necessity of industry and frugality on their part. When a man becomes a millionaire, his children generally are useless drones in society, and few of them have enough spirit and desire to put forth efforts to hold the estate which they inherit. They do not use their talents in building houses or ships, in navigating the ocean, tilling the soil, or following any productive occupation. They simply consume the property which their fathers,

perhaps selfishly and unrighteously, have taken from the past generation

This faculty should be acted upon normally, but not stimulated by false incitement, or placed under the domination of perverted Approbativeness or morbid Cautiousness. Some people, by undue activity of Cautiousness, come to think they must acquire a great amount of property or they will die in the poor-house, and they have a kind of insanity in that direction. Perverted Self-esteem frequently gives a man such a sense of power that he aims to use his money like a whip in a governing, overbearing way. But the proper training of the faculty, especially in conjunction with the sentiments and the higher intellect, will lead to its judicious exercise in industry, frugality, and honest acquisition.

It should be specially borne in mind that this feeling or propensity, like all the others, should be trained in connection with Conscientiousness, Benevolence, and Friendship. Each person should be taught to feel that he ought to do some good, render some service, accomplish something; at least he should be so frugal and industrious as not to be a tax upon his friends or the public. During great wars, when money is expended freely, and opportunities for acquiring are numerous, there seems to be developed in the public an insane greed for gain. This has been the case in our own country during and since the great war. There are men, who account themselves honest in dealing with individual men of their acquaintance, who do not hesitate a moment to defraud a government, city, state, or nation; hence the gigantic, speculative, swindling operations which have disgraced many distinguished men. They would feel guilty of perpetrating a like fraud upon their neighbor, yet their peculations tax their neighbors severely for the support of the Government in making up deficiencies caused by their unrighteous gains.

SECRETIVENESS.

The design of this faculty is to produce reticence, concealment, judicious evasion, policy, and to exercise a restraining influence upon the other faculties. Some persons will bear pain, sorrow, disappointment, without showing it. Others will respond to any influence, good or bad, pleasant or unpleasant, as quickly as a bell will respond to a blow, or a musical instrument to a touch of its strings. These people speak out their thoughts, and in this respect place themselves at the mercy of others. One of the most palpable illustrations of saying too much, and being too frank, that we recall, occurred to the writer some years ago in Brooklyn, N. Y. He rang the door-bell of a house on which was posted a bill, "This House for Sale; inquire within." A little girl about eleven years of age opened the door. She had light-blue eyes and a blonde complexion, with a thin head above the ears, and was one of those nervous, helpful, wide-awake, open-hearted girls. We asked: "Is your father in?" "No, sir; *he will not be in till eight o'clock.*" Thus she answered twice as much as we asked. "Do you happen to know what your father asks for the house which the bill says is for sale?" "Yes, sir," she replied. "He asks four thousand dollars, *but will take thirty-five hundred.*" Large Secretiveness would have answered the questions very differently, and not have falsified the truth. We did not ask her what her father would ultimately take, but simply what he asked, and she should have given only a simple answer to that question.

Every one is conscious of thoughts and feelings the outward expression of which would be unwise and improper. Secretiveness serves to hold the other faculties in check until the judgment, the conscience, and prudence shall have time to decide upon the propriety of explaining the subject. When newspaper reporters visit some indi

viduals in the way of "interviewing," it would seem that the persons were transparent; they can not say a little and stop, nor can they pick and cull their thoughts in such a way as to utter only that which is judicious, or that which the public has a right to know; but what they know about a subject is discharged like a bowl of jelly, which comes out all in a lump if it be emptied at all. Another man will be polite, will say something, but not commit himself, will not say that which is untrue, nor improperly conceal anything; but the interviewer goes away just as wise as he came, and, perhaps, has learned something that he did not know before, viz., that occasionally one meets a man who knows how to keep a secret. For Secretiveness, small, see Noreross, Fig. 19, Page 107.

Doubtless, Secretiveness is exercised in connection with the desire for praise, in concealing faults, in putting the bright side in front, and in ministering to the gratification of Acquisitiveness more than in connection with any of the other faculties. Secretiveness is sometimes used as a kind of cat's paw to do the sly work with. It serves as a veil of mystery, and sometimes tends to mislead. It holds up false lights as a decoy, but does so only when it acts without a proper union with Conscientiousness.

The teacher will be able readily to point out those students who are governed by policy, who are tricky and unreliable, and also those who are outspoken to a fault; and should try to guide those in whom the faculty is weak, and also those who have it too strongly marked, in such a manner as to bring about in each, so far as may be, a judicious medium. Threatening children with mysterious punishments, falsifying, deceiving in any way, are calculated to blind the Conscientiousness of children, and also to excite their Secretiveness. They soon learn that if the parent, teacher, or servant falsifies, misleads, or in any way influences their will by false pretences

they may do the same thing with their associates. Children who are in a school where the teacher is the soul of frankness and judicious guardedness of expression, will show it in their own conduct and conversation in the play-ground. On the other hand, children who are under the dominion of parents, teachers, or servants who are too largely developed in Secretiveness, will always be playing sly tricks, or manifesting false pretenees, or in some way showing perverted Secretiveness, acting without the proper control of judgment and Conscientiousness.

We remember a case in school, when something had been done that was wrong, the teacher demanded of the boys to know who had done it, when Charles Wright spoke up, and said: "I was one of the rogues!" But he declined to tell who were his associates. He was willing himself to confess when questioned, but was not willing to bring the others into trouble or disgrace. Finally, the teacher, in discussing the subject before the school and with the boy, and, doubtless, admiring his frankness in inculpating himself, and his reticence and honor in avoiding the inculpation of others, seemed, as we remember it, anxious to get out of the difficulty without punishing the boy, and said: "I hardly know what I ought to do in this case." And turning to the manly boy, said: "Charles, if you were a teacher, and you had a boy under the same conditions that I have you here, what would you do?" We remember how his blue eyes dilated, and how his form straightened up as he said: "I would say to the boy, 'I will let you go this time, and try you again.'" For a moment the teacher was unable to speak; but when he did, we recollect that his eyes were moist and his voice mellow, as he said: "I will try you again." Let the teacher remember that the influences he brings to bear upon the plastic minds of pupils in the school will stamp the truth or the error upon their minds and memories, will influ

ence their character and conduct as long as they live, and prepare them to make like impressions upon those brought under their influence. Good actions never die, and evil actions live, and work for evil after the repentant evil-doer may have long been in his grave.

CAUTIOUSNESS.

The organ of this sentiment is located at that portion of the head which is situated upward and a little backward from the opening of the ear—the top corner, so to speak, of the head. Anatomically speaking, it is located in the center of the *Parietal Bones*. It is generally the widest part of the head, and frequently interferes with the fitting of the hat or bonnet. The engraving, fig. 29, presenting the back view of the head, will give a good idea of the development of the organ of Cautiousness when large, average, and small—the two dotted lines showing the medium and small development. We find some cases of excessive development, which would show a head with nearly an inch more width on each side than our cut would indicate, and some are much narrower at the location of the organ than the inner dotted line would show. This cut is introduced to guide observation, and show the methods of the development of the organ.

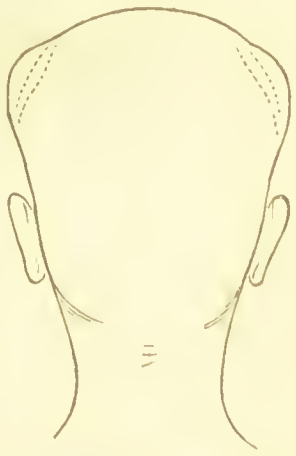


FIG. 29—CAUTIOUSNESS. Large, Medium, and Small.

USES OF CAUTIOUSNESS.

Danger surrounds us, and to adapt us to that condition, this element of prudence, watchfulness, solicitude, and

carefulness forms a part of our character. There is no emotion more painful than that of fear. Some have the faculty altogether too strong; others are almost destitute of it, and they become rash, careless, and indifferent to danger and difficulty. It is a great, conservative element in character, and ought to be well-developed. When it is excessive it paralyzes courage and energy, and of course magnifies trouble and difficulty.

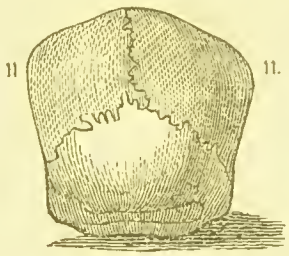


FIG. 30.—SKULL. Cautiousness, Very Large.



FIG. 31.—SKULL. Cautiousness, Very Small.

In the training of this feeling many errors prevail. Children are threatened with horrid objects of dread. They may be frightened into obedience by stories of the dark, of witches, sprites, and evil agencies; and the organ sometimes becomes inflamed, and even diseased, and some have been driven to insanity through its excessive excitability. When fear becomes the law of action, conscience and judgment are set aside. Some are very bashful in the presence of strangers, and they become confused. They can not recite lessons, or make a good appearance among strangers; and how natural it is for others to be provoked at such timidity! Nearly every person will remember instances in which he understood his lesson, but the embarrassment and anxiety arising from Cautiousness and Approbativeness, utterly stultified his memory and judgment, and he broke down, greatly to his own chagrin, and to the surprise of his teachers and all his friends.

The proper way to train a child that is excessive in Cautiousness, is to attract its attention, away from itself and its fears, to something else. Awaken its intellect, its imagination, its love of a story, its sense of wit—anything but Cautiousness. Telling a child that a stranger "will not hurt it," is precisely the way to excite its fear. If we were teaching and had a timid pupil, we would not call upon him the first hour of the session for a display of what he might know. We would let him march with the other pupils—let him recite in concert, if he liked, or refrain from it. Pay no attention to him; let him get used to the place; and when we wished to make his acquaintance more especially, we would ask him if he had brothers and sisters, and how many, and if he had ever been to school before, and whether the teacher were a man or a woman; and when the faculties of Cautiousness and Approbativeness were measurably allayed, we would venture upon the real subject-matter of inquiry by degrees.

Persons who make calls in families where children are bright, but cautious and sensitive, often make a great mistake, in their desire to please the family, by paying particular attention to the children. This course embarrasses the children, and it makes them act in a way that embarrasses the mother, and it is an excitement and a worry to all parties; whereas the visitor should pay no attention to the child, giving the mother a wink perhaps that would be understood, and very soon the child's embarrassment and fear will have abated, when such attention as may be necessary will be acceptable to the child and the mother. The child and the visitor are no longer embarrassed. But the visitor who insists on having the child come to be talked to, and the mother who pushes, pinches, and jerks the child, and gently frets at it because it acts *so rudely*, and gives it a scolding after the visitor has gone, spoils the visit for all parties, and makes the

child run the next time he hears the door-bell ring, lest he be subjected to a like painful experience.

We have noticed when a timid child was brought to us, who was not willing to submit his head to examination, if we began to look at the feet, and talk to the child about its shoes, and then measured one foot for *skates*, it would put up the other to be also measured, and forget all about the embarrassing conditions. Then we would measure the head for a new cap or hat, and thus approach the child through its intellect, allaying the fear and excitement produced by Cautiousness.

APPROBATIVENESS.

The desire to gain the approval of others is one of the strongest traits of human nature. This faculty lies at the basis of the desire to please, and its influence upon character is immense. It gives the sense of shame and mortification when public sentiment is brought to bear against the individual, as it also produces gratification when praise, attention, and kindly appreciation are bestowed. It is a powerful stimulant to virtue and effort. If a man were living alone in the world, or if there were but a single family upon an island, cut off forever from all contact with others, their conduct, if not their characters, would undergo a marked change. To most persons in civilized communities, the love of praise is both a strong and a weak point. When it takes the form, or works in the direction of flattery or vanity, it becomes a weak point. When it serves to create ambition for eminence or noble attainment, it makes us strong, or is a powerful stimulant to the elements of strength. Doubtless, merchants, artists, professional men, writers, and orators will think more of the fame which success will give them than of the mere acquisitions.

It does not require a great deal of money to supply a man's wants, but wealth gives him independence, influence, popularity, and power; and it is the consideration of these which stimulates to acquisition. If the orator, writer, poet, or artist can be remembered with respect and admiration in all circles, he feels that his labor has not been in vain. There are some men who have faith enough to sustain them through trial and privation, conscious that posterity will do them justice. They have a prelibation of the honor that shall be bestowed upon them when history shall embalm their names.

This organ is situated on each side of the crown, and it gives width and elevation to that region. It is indicated by length of fibre from the brain-centre, or *medulla oblongata*, or capital of the spinal column, to the outward situation of the organ. It lifts the head as if it were pulled upward and backward. Self-esteem is located on each side of the middle line of the head, between the two organs of Approbativeness.



FIG. 32.—APPROBATIVENESS.

The term respectability, or the idea which is crystallized within it, has a wonderful influence upon most people, and in the main it is a laudable and commendable state of mind; and it grows out of the normal activity of Approbativeness. The chief error in respect to this faculty arises from its paramount activity and consequent frequent perversion. While it is directed to proper objects, and is not stimulated to undue activity, but is kept in proper subordination to the higher powers, its manifestations are not only pleasurable to the owner, but productive of virtue, good manners, and good order.

SLAVES OF PUBLIC SENTIMENT.

Although the undue activity of this faculty makes a great many people slaves to false fashions and false standards of respectability, it need not be crushed out, but allowed healthy development and harmonious activity that may be blended with the other faculties in giving proper shading to the character. In school and in the family this faculty is enflamed in a thousand ways; of course, without any intention of wrong-doing on the part of the parent, friend, or teacher. We often see it excessively developed in the head of a little girl, who is beautiful and interesting in many respects. Persons who are anxious to please her parents as well as herself speak thoughtlessly of her beauty in her presence. Whatever she says and does is repeated by fond parents and applauded, and, of course, she is necessarily made vain, if not selfish. If she does not receive praise constantly, she feels neglected and miserable; and chagrin or neglect excites Approbativeness unpleasantly, producing a kind of jealousy. In school, her good looks and gay attire will attract the attention of all, awakening the partiality of the teacher and the older pupils, and as a natural consequence, she is petted by all. If she is sharp and selfish in her temper, it is likely to be regarded as smartness, and it will be tolerated, if not excused. We have rarely seen one of these petted children who was faithful and successful in study. Popular without effort, why should she labor to achieve success and respect for excellence in scholarship? Follow the same person into society—she meets with flattery, expects it, lives upon it. Such persons are sometimes even rude, fretful, and impolite. They are called "wayward beauties," "spirited," and every other name but the right one is applied. Follow her to church, and it is easy to see that her fine appearance and elegant attire are at least the

means of attracting attention. She is fed on flattery, which the admiring attentions she receives are calculated to awaken. If she is defective in moral culture, because she has not been called upon to exercise these faculties in order to secure approval, it would not be strange, and if she were to become a selfish, peevish, hypocritical woman, utterly unworthy to be a wife and mother, it would not be a surprise to those who see clearly and think soundly.

How Ambition Ministers to Virtue.

Study the faculty in another phase. Suppose a little girl, with a plain face, having large Approbativeness, and who is, of course, hungry to be approved, yet has not the external attractions to win admiration. At home she is not called beautiful, and, perhaps, her parents are not able to deck her in elegant attire ; at school she is not flattered, and she has, therefore, nothing to withdraw her attention from her studies. Desiring, through active Approbativeness, to gratify her ambition, she sees only one way open to her to secure approval, and that is to be faithful in her studies, attain eminence in scholarship, and be patient, kindly, friendly, gentle in her manners toward her associates, that she may thereby win their respect, affection, and regard. She thus cultivates her moral and social affections, studies to make herself acceptable, though her face is not attractive, and seeks to rank as high as possible in her studies, as well as in her decorum. Does it need a prophet to see that she will be the angel of some home, where solid virtues will be cultivated as a means of approval and applause, rather than the showing off of beauty and costly apparel to win temporary admiration?

We have seen it in several schools, we have witnessed it in many families, where Approbativeness was made the moving factor of all influence. Under this method of training and government, praise and censure are brought

to bear upon the conduct of the young, and Approbativeness thereby becomes the only conscience which the child has, or it would seem that the parent and teacher thought so, since all appeals are directly made to this faculty. Instead of saying to a child, do this because it is *right*, and showing that it *is* right, the child is often asked: "What will people think?" "What will the world say?" If the people and the world were thoroughly good and wise, their approbation would be a good standard of morals; but even then, it would be better to appeal to the child's sense of justice, to its disposition to do right because it is right, and that would build up a standard of right-doing in him, independently of the world's knowledge or opinion in regard to his conduct.

If this organ be very strong, it should be the aim of the teacher and parent to avoid addressing the child through this faculty, but appeals should be made to the intellect, to Conscientiousness, to affection, to Benevolence, to the sense of the fitness and propriety of a particular course. Let the child be trained to feel that no praise has value except that which is sanctioned by the principles of reason, righteousness, truth, and justice.

How Vanity is Fostered.

The trouble in the training of this faculty, as well as in that of many others, is that the weak points and also the strong points of the child come in the same place where the parents' strong and weak points do. A mother who is keenly alive to what people will say, is very apt to ply her children with that influence. If Approbativeness be large, she will be likely to use that faculty, because it qualifies her to bring its influence strongly to bear upon her child; and if it be the strongest trait with her, she thinks it is so with her child. Let a teacher who has an excess of Approbativeness go into a school, and all the

pupils who are organized in the same way will soon feel the magic power of her influence. A course of conduct that can be ridiculed or made the subject of shame will keep these pupils on the *qui vive*, and, perhaps, for a month the stern mandates will not be brought to bear upon the dull or active consciences of the pupils. An act is called "shameful," "disgraceful," "ridiculous," "outrageous," "inelegant," "impolite," "very improper," but it is not once called "wrong." If it be shameful or ridiculous, that is reason enough for such a teacher and such pupils why anything should be avoided. It may be all else that the teacher says it is, but if it be intrinsically *wrong*, *that* should not be left out; indeed, it should be stated as the first objection, and all the other conditions may then be instituted as collateral forces.

How to train extremes.

If a class of pupils could be selected out of a hundred in whom Approbativeness were weak, and who needed, therefore, a good deal of culture in that respect, we would like to place a teacher in charge of such a class who had a little too much Approbativeness, so that she would keep ringing the changes on that faculty, putting it, as it were, under her hothouse treatment, and bringing the focal rays of its might upon the unproductive soil to induce a development of the organ in the pupils who had too little of it. On the other hand, if we could take all the pupils in the school who had excessively developed Approbativeness, we would put them in charge of a teacher who had only a medium share of it, but a strong development of those qualities with which the pupils were endowed only in an average degree. In six months' time the feverish excitement of Approbativeness in those pupils would be lowered by twenty-five per cent., as it ought to be, and they would learn, for the first time, perhaps, to take into consideration other

points in regard to conduct and chara ter besides Approbativeness; would learn that other influences could be brought to bear upon the regulation of the conduct of their daily life, and that conduct had other and even richer remunerations.

Of course it is not expected that pupils can be classified with respect to each of their faculties, but only according to groups of faculties and temperaments. But if a teacher be wise and well-informed in regard to the correct mental philosophy, he will instantly see who is well-endowed with the faculty of Approbativeness, and who is deficient. This can be determined as readily as any other fact in respect to the person. We can see who have large and who have small eyes; who have strong features, and whose are delicate; who are dark and who are light; who are prominent in the brow, and who have a prominent top-head; and the development of Approbativeness is quite as easily recognized, and even the natural language or manner of the person, at the first interview, will readily tell the phrenologist whether Approbativeness is a leading trait, or whether it is much excited at the moment.

Teachers and mothers should thus take the hint, and the treatment of those in whom the organ is large or small should be so conducted as shall be best for the individual, and best for the purpose to be attained. This being one of the more influential of the faculties, it may properly form the nucleus for a leading classification of pupils.

If one wishes to exert a quick influence, if he has only a moment to act, he must work through the strongest faculties. If his object is to cultivate, mold, and train the character, then he should guard against exciting the abnormally strong faculties, and treat the subject so as to call out the dormant and less influential faculties. We know that a man who loves money supremely will be most easily influenced by an address to that feeling. It becomes

the center and source of influence in himself, his object of desire, the inspiration of every effort; while Approbativeness inspires one to work hard, and watch and be wakeful and weary in the pursuit of objects the attainment of which will give rank, reputation, and honor.

This faculty is certainly right in its normal action. It ministers to virtue among those who rise to a medium position in morals more than it ministers to vice. Among the baser sort, who simply glory in their strength, their lust, their courage, or their cruelty, it tends to foster vice. The faculty sometimes leads to crime and sin, but it ought to work with the higher sentiments, so that ambition and pride shall minister to virtue and lead in that direction.

The standard of respectability will be catered to by this faculty, whether it be high or low, good or bad. In commercial circles, wealth is a great element in respectability. Among scholars, attainment. Who thinks to ask, or who cares how much Tennyson or Longfellow may be worth in property? We may hope they have a sufficiency. Their rank and renown have in no sense the flavor of finance.

SELF-ESTEEM.

This faculty has been derided and ignored to such an extent that many people recoil at the idea of being supposed to have the organ large. The nature of the faculty is to give dignity, self-reliance, and a sense of one's own worth and value. It appreciates positions of authority, and likes to exercise a ruling influence. It is too small in most people in this country.

The public is sometimes mistaken in charging persons having large Approbativeness, with having large Self esteem. True, the approbative man wants to set off his talents, graces, and achievements, and is apt to talk about what is his, and what he has done, for the sake of attracting attention to himself. A man with large Self-esteem

is not so likely to boast and to seem egotistical as the other.

There is too little of dignity and honorable self-reliance —too little independence of perverted public sentiment. Thousands of young men do wrong. They learn to smoke, and drink, and go into bad company, simply because those who are older and more experienced, and have more wealth and influence than themselves, do these things, thus following blindly the dictates of Approbativeness. When Self-esteem is large and a man is self-centered—balanced on his own selfhood—he is not half so likely to follow in the wake of dissipated people as he would be if his Self-esteem were small and Approbativeness large.



FIG. 33.—SELF-ESTEEM Large.

In fig. 33, the head rises high at the crown. From the opening of the ear to that point the distance is great. The difference in that head with Self-esteem large, and many a head in which it is deficient, is indicated by the dotted line which cuts off the crown of the head. The reader is referred to fig. 2, p. 21, for a contrast with this in the crown of the head.

In the training and education of the young, this element should not be crushed, but encouraged. The child should never be degraded or underrated. If Self-esteem be weak in him, it should be cherished and encouraged by a frequent address to his manliness and honor. Sometimes children are called debasing names—such as "rascal," "stupid simpleton"—a practice which serves to annoy the child and deprave his disposition, and lower him in his own self-respect But nine-tenths of the training is addressed to Approba

tiveness rather than to Self-esteem. The idea is impressed upon the child that his misdeeds will be unpopular, not wrong in themselves. It is not shown that they will be mean and unworthy of him, whether the public knows it or not. We are taught humility, to be sure; and we are also told to "love thy neighbor as thyself." And since we are enjoined to love our neighbor as ourselves, we may love ourselves in equal ratio if the self-love do not degenerate into selfishness.

Whatever may be said against Self-esteem, it is one of the most ennobling of the human characteristics, and when properly shown in others, it wins our respect, though it may sometimes chafe our own self-love.

FIRMNESS.

Firmness is located on the top of the back part of the head, just forward of the crown, and when large it gives elevation to the head at that point directly above the ears. We advise teachers, when favored with one of these tall-headed pupils, to guard against arraying that strong feeling against the requirements of the school. It is an excellent faculty. It gives strength, sturdiness, presistency, and power to the character; but it may become negative, and stand in the way of all progress and conformity to that which is decorous and accommodating. Those in whom it is strongly marked may



FIG. 34.—MR. TURNER.—FIRMNESS Large.

be as benevolent, just, friendly, sympathetieal, intelligent, and obliging as any person in the assembly; yet if they be commanded, if coercion be offered, if there be a tendency to drive, if a dogmatie, domineering spirit is indicated by the teacher or employer, such persons very frequently brace up and say, "I will not be driven." Reader, how is it with yourself, especially if you have this faculty strong? Can you not be persuaded a mile easier than you can be driven an ineh? If people *ask* you to do things that are ineonvenient, costly, and troublesome; if they tell you they know it will be diffieult and burdensome, but they need the favor so mueh they will be greatly obliged if you will eondeseend to do it; how you put yourself to serious inconvenience that you may benefit them; how their persuasive appeal to you warms up every sentiment of generosity and liberality; but one word or look of command in that direetion would brace you up against all their wishes. Falstaff said, "I'll do nothing on eompulsion!" and he has had a good many followers. Mothers will bear us witness, if they have children with large Firmness and Self-esteem, that they never dare assail them with dominant, dietatorial measures with any hope of success. There are men who hire others for years and never command them, but simply say, "When you have finished what you are now doing, you may do this or that;" but a mandatory assertion, anything in a dietatorial way, would arouse Combativeness, Firmness, and perhaps Approbativeness, and the person would resent the dictum as an insult and perhaps quit the man's serviee. In military life obedienee—prompt, implicit, and complete—is considered honorable; and since orders are generally issued to a platoon, eompany, or regiment, the orders are not personal, as they often are in families, workshops, and stores. But in military life, any commands uttered outside of what is ealled

duty, would be resented just as quickly as they would elsewhere.

Those who are deficient in the faculty of Firmness should have it strengthened and encouraged by every legitimate means. They should be addressed in such a way as to inspire perseverance, positiveness, and strength of purpose, and should be encouraged against vacillation, and braced up wherever it seems to be required. This may be done by setting them about that which requires persistency, strength, and steadfastness; but they should not be overloaded in this respect.

CONTINUITY, OR CONCENTRATIVENESS.

This faculty is sometimes confounded with Firmness; but determination, a resolute, headstrong purpose, is one thing, and patience and self-contained abstraction of mind, is quite another thing. There are certain trades and occupations which require continuity of thought and action; for instance, the sewing of long seams, knitting, weaving, engraving, copying, polishing furniture, carriages, or marble, drilling rock, or hard iron and steel. He who can bring his thought to this monotonous repetition of effort, and keep at it like the pendulum of a clock *ever*, EVER, without permission to hurry or to stop, will appreciate it. In study it is an essential element. Some pupils will bend over their books, taking no interest in anything else, neither seeing nor hearing what may be going on around them; they are called absent-minded, but a different term would be more appropriate. Their mind is most essentially at home. It does not wander, and, therefore, is not absent. A person with large Continuity, having this patient, abstract, studious spirit, will accomplish, in the way of study, twice as much as a person of similar talent who can not keep his mind on his book. Some can not

study while a class is reciting within hearing, and will follow the recitation in spite of their desire to stick to the book; and while there are some advantages in public recitations where the whole school can hear, there are serious disadvantages connected with it. If there should be entire silence in the room, or such a continuous, uniform, monotonous buzz or noise as to take off the edge of every particular noise, students could study who lack Continuity. The roar or rattle of machinery at first confuses the listener, but time adapts him to it, so that he can read or think quite as well as when there is no noise. Indeed, persons will sleep soundly in a mill where there is a steady roar of machinery; and if the sound be changed, he will at once awake, especially if he is accustomed to attend the machinery and knows the proper or the wrong sound of it.

AMERICAN DIVERSITY.

In America the faculty of Continuity is not as well-developed as it is in most other countries, because in a sparsely-settled country there is not so thorough an analysis or division and classification of labor as in the old countries; hence men become accustomed to do many very different things. It is not strange to find a farmer who can mend shoes, do something at carpentry, or who can tinker up his farming implements; and once in a while we find a farmer who has his blacksmith forge, and does his own work in that line, rudely, to be sure, but it saves paying out the money and answers his purpose; and by changing from one line of effort to another, he gets culture in many ways. A man from Indiana came under our hands for examination, and we described him as having much mechanical ingenuity and small Continuity, and that he would be likely to spend his whole life in learning trades, instead of taking one and following it to perfection. He informed us that he could get full

wages at seventeen different trades, but the one he "took up" last, namely, gunsmithing, he liked best, and had followed it for several years. We occasionally find a man in the United States who can do everything passably well in the construction of a house. He can lay the foundation as a stonemason; as a carpenter, he can put up the frame-work; as a joiner, he does the wood-work; he then plasters the walls and does the painting. If he had lived in a city, he would, probably, have been a master workman in some department, and putting all his talent into it, would have attained eminent distinction.

DIVISION OF LABOR AND STUDY BEST.

The advancement of society requires that each person should adopt some pursuit best calculated to use his faculties to good advantage, that he may serve himself and the public well, and in that way each trade or occupation can be filled by skillful workmen, who are naturally endowed with talent to excel; thereby the public is much better served, and objects of art and mechanism are pushed to perfection, and each man bringing his whole mind upon the special department of business, rises higher in his pursuit, works more easily, and can surround himself with more of the comforts of life than if he could manufacture everything he must have, when, of course, everything would be clumsy and not very plentiful. A good library and a course of lyceum lectures will help men to knowledge in other departments than their own, and thus they may be well-informed without having experience in the whole realm of pursuits.

Some pupils having small Continuity desire variety in their studies, while others incline to stick to one or two studies at most. Such might profitably attend to two studies one day and two other studies the next day. One pupil gets tired and nervous when he has written two

lines, another wants to write a whole page, and just gets deeply interested at the close, writing the last line the best of all; while the first, if he continue the lesson, the writing becomes poorer and poorer at every line.

During the war, a soldier who had been put on sentry duty on a snowy and miserable night, by some accident had been overlooked and had not been relieved, and was standing a second tour of duty. Hungry, cold, and depressed, he was carrying his gun as if the gun and man were frozen together, when Major Haggerty, a friend of ours—who told us the story—happened to come across him, and noticing his woe-begone look, covered with snow that had been partially melted and frozen all over him, and coming close to him, and seeing who it was, inquired: "Is that you, Mike? What are you doing out here all this time?" Mike answered: "I am standing a sen-tu-ry." The major hurried back to headquarters and reported the case, when Mike was relieved of centennial duty. It was a lesson in continuity too severe for him.

THE SOCIAL NATURE.

There are five faculties which constitute this group, and their organs are located in the back part of the head, and when large, give not only roundness and fullness to that section, but length from the opening of the ear backward. These we have analyzed extendedly in a small work, to which we refer the reader.* These organs are, first,

AMATIVENESS.

This tends to give kindness and courtesy between the sexes, and exercises a powerful influence for good upon all who are rightly related to life in this respect. The

* "Thoughts on Domestic Life; or, Marriage Vindicated, and Free Love Exposed." S. R. Wells & Co., New York, publishers. Price 25 cents.

separation of the sexes in school-culture, we think, is a mistake. Each desires to please the other; and where this influence is brought silently and distantly to bear, it will awaken ambition, moral feeling, and the practice of general decorum. Each is put upon his or her good behavior. Boys and girls are born into a family, and each aids in the culture of the other. The boy who is so unfortunate as to have no sister, shows it when he goes into society by a kind of awkward bashfulness. The daughter who has no brothers is unfortunate, because when she enters society she has a lack of strength, and poise, and power which she would have acquired in the society of noble-hearted, manly brothers. Separation does not necessarily secure the objects sought in the separation. Morbid mystery and uncertain yearning of soul for companionship will not be silenced by separation. If it required an argument to show that men and women exert a silent, salutary influence upon each other, a moment's thought as to the social morals of soldiers, miners, and sailors in their isolation will at once solve it. Women gathered in shops or factories, and separated from the unspoken yet benign influence of the society of the opposite sex, to act as a stimulus to good behavior and correct deportment, become careless of their appearance, of their language and manners; and their remark, "There is nobody here but the girls," shows that they need an influence which will promote decorum, grace, and good manners.

CONJUGAL LOVE.

This is supposed to lay the foundation for that individualism in love that leads one to select from all the world his beloved object, and remain true to that one for life. This is manifested by certain birds and animals as well as by human beings, and in respect to mankind, the life-long

union is the normal condition of social life. For an extended analysis of this important faculty, we refer the reader to the work before mentioned.

PARENTAL LOVE.

Dr. Spurzheim gave this the long, yet meaningful name of Philo-progenitiveness, or the love of progeny. Parental affection is pretty well understood. The little girl shows her mother-feeling in caring for her doll, and imagining it to be the prettiest of babes. The faculty, or, more properly, propensity, gives also a love for young animals, a fondness for pets, a tendency to cherish whatever will look up to us and trust us. Man learns to love his horse, his dog, his ox, his cow. And he who, walking the field upon his farm, is seen to have all his animals follow him, running to him from every quarter of the field, and being reluctant to have him leave them, has in their conduct a certificate of good behavior and tenderness toward them. No person should be a teacher who is deficient in this respect, unless it be in the senior class in college; for parental regard and sympathy toward young persons on the part of the teacher is to them a means of grace and salvation. Persons who have this element strongly marked, especially if Veneration be well-developed, are fond of elderly people —those who have become a second time children.

FRIENDSHIP—ADHESIVENESS.

This is the basis of the gregarious instinct. Many of the lower animals show it strongly. They go in flocks or droves. Some are solitary in their habits, and lack friendship or adhesiveness. It is not confined to sex, nor much influenced by it. Girls become attached to girls, and

boys to boys, for life. The friendship of early days, and especially of school-life, often lasts through life. Those in whom the feeling is strong, like to study in company. They join associations, fraternities, clubs ; companionship must be interwoven with all they do.

This is a powerful element in the process of government and instruction. The teacher who can win the affections of pupils, readily becomes their loving master. They like the teacher because the teacher likes them, and when this fraternal, interblending spirit is once established, the law of love is the law of the school. Persons who are deficient in this respect rarely become good teachers, because pupils will not adhere to them, will not feel drawn toward them, and will not encourage them to like teaching.

INHABITIVENESS.

This gives us the love of place and home, and constitutes a kind of band or enclosure which brings all the other friendships and affections into coöperation. The word "home" embraces all that relates to love, affection, childhood, fraternity. Patriotism grows out of the love of home, and this love of home and country is regarded in some parts of the world as a great grace, and he who is destitute of patriotism is unworthy of human sympathy or brotherhood. Those who are home-sick when they go away to school, those who daily hurry home from school, evince it, not because they are hungry, but because they want to see home, and the little one, and the pets, and mother; these are they who have a mortgage on all that is loving and affectionate, and who can contribute to the common stock of fraternal affection. True, they want a particular seat or place in the school ; they are not satisfied to change their place ; they want a special seat at the table ; they think a great deal of the old hearthstone, garden, lawn,

in short, home; and the song "Sweet Home" tells to the one with large Inhabitiveness of a thousand joys that home has yielded.

CONSTRUCTIVENESS.

THE BUILDING INSTINCT.

The organ of this faculty is located in the region of the temples, and when large gives wideness to the head in that region. It lays the foundation for mechanical skill and ingenuity. Without it man would remain a savage, and could reside only where the climate was warm enough so that he would need neither house nor clothes. Where winter prevails, man must use mechanical skill to fabricate clothing and construct a dwelling place. Some of the lower animals are endowed with this faculty. The beaver and the bee build; the horse and the cow do not build, and of course the latter are destitute of the faculty.



Fig. 35. WM. H. LEININGER—Inventor. Constructiveness and the perceptives Large.

Though man was created without any natural weapons of defence, and though his organization is weaker for self-defence than many of the lower animals that are even smaller than he is, yet by means of his constructive talent, combined with intellect, he is able to design and execute implements with which he rules all

animals. The fiery horse is curbed by his skill; the most powerful animals are entrapped by his devices. Even the monarchs of the deep yield to the weapons which his ingenuity has made. The bullet from his gun overtakes the eagle in his flight, and checks the fierce advance of the lion. His constructive skill has even brought the lightning from the heavens, and sent it obedient across the continent and under the sea to carry his messages. The great inventors of the world have given us the ship, the steam-engine, the factory, the printing-press, the telegraph, the chronometer, the telescope and microscope, the suspension-bridge, the sewing-machine, the piano-forte, and the stately cathedral, the georgeous palaces, all speak of man's inventive and mechanical skill. Ten thousand comforts and conveniences that adorn life, if questioned, would say, "Constructiveness is my father, and Ideality is my mother."

A faculty so useful as this—so indispensable to the welfare and the development of the human race—should be carefully and wisely cultivated. A man who looks out upon everything which has been constructed by human skill, and feels that he can do the same thing, that he can take the tools and attain similar results, walks a monarch among his surroundings; but the helpless noodle, who has never been taught to do more than put on his clothing, and never enough to drive a horse, or harness it, must look upon life with a feeling that he is weak and useless.

When the colonel of a Massachusetts regiment was at Annapolis, at the beginning of the war, and found that the retreating Confederates had hastily taken a locomotive to pieces, and thrown some of its parts into a swamp or river, and the rest was all scattered about as helpless fragments, the colonel called his regiment to order, and commanded every man who was a machinist by trade to step three paces in front, and he had a good representation.

He ordered them to march with him, and addressing the eldest, asked him if he thought he could put that locomotive together. He gave a very knowing look, raised his face to his colonel with a smile, and said, "I think so; I made it!" In a few hours the locomotive was set up and ready for work.

A man who feels that he can do anything that has been done, that he can construct anything which he looks at that has been made by human ingenuity, has certainly a source of independent feeling, is conscious of power and usefulness, and must feel himself to be more of a man than the nabob whose mechanical judgment has never been called into use; whose skill to achieve has never been exercised. We trust the time will come when all persons, who are not specially trained to use tools by being devoted to agriculture and manufactures, shall have so much training in some mechanical pursuit as shall enable them to win a good support. One never knows how long his patrimonial estate shall be preserved to him, nor what changes in government shall send him a wanderer to strange lands. A pretty story of an European duke, who conceived the singular notion of refusing his daughter in marriage to a suitor, unless he could show him that he was able to support her with his own hands, and required him to go and learn some mechanical trade before he consented to their union, had in it more philosophy than at first appeared. The young man, resolved on winning his bride, engaged himself to a maker of willow baskets, and in six months had produced with his own hands elegant specimens of workmanship. Years afterward, when political changes and revolutions drove the duke and his son-in-law from their country to a foreign land, where the dukedom and the estates were not available, the trade was adopted; an establishment was set going, which gave not only a good support, but ultimate

wealth to the family. Then the wisdom of the whim as a safeguard against poverty, was verified.

Attached to every college, instead of the gymnasium, or in connection with it, there might be shops in which useful industry could be employed; and while students would thus be taking exercise with the saw, the plane, or the hammer, for the benefit of their health, they might learn to construct chairs, wagons, cabinet-furniture, and a hundred other useful things. Then if the student should ultimately follow a talking profession, and were to lose his voice, he would not be obliged to sink down to pauperism. Thus every intelligent and well-developed boy might acquire a good book education, and at the same time learn some useful trade.

The Cornell University, and some other schools, have entered upon a course of instruction in theoretical and practical mechanism, thus combining high general culture with the practical arts, and redeeming mechanism from the rank of ignorance and drudgery.

The energy and skill which boys exercise in playing base-ball and boat-rowing, during their collegiate course, would teach them to build a secretary, a boat, or a set of furniture. Of course we would not reduce children to the drudgery of hard and weary work, but when a boy is making a kite, a water-wheel, or a mud-dam as a means to propel it, we see in him no lack of buoyancy or boyhood. He may idly chase a hoop, or spin a top, and no valuable result is realized.

Besides, the exercise of Constructiveness awakens ingenuity, or intellectual planning talent. We knew a boy in our school-days very intimately, whose father had a set of tools, and the boy learned to make cross-bows, drawers for the school-rooms, hand-sleds, and other things which his associates desired to possess, and they would engage him to do such jobs for them, paying him well for it;

and while they stood idly by, waiting for the article to be constructed, he would never feel that he was their servant, but rather that he was the master of the situation; and he has found, to his pleasure and profit, that his cultivated ingenuity has been of essential service to the present hour.

Let mechanical operations be made delightful to a boy, and while he gets the vigor, incident to labor, which his growing organism so much needs, he will acquire also mental elasticity as well as handiness in the use of tools, and the planning and executive talent will be of essential importance to him in every field of future life. Why can not little girls also be instructed in the use of the needle, the scissors, and the sewing-machine, in the construction of dolls' clothes, and afterward in the construction of their own, or, if they be of a wealthy family, for the manufacture of garments for the poor? Those who do not use tools should be ashamed of ignorance respecting the method of constructing picture-frames, books, furniture, houses, and tools of every kind. Many are not ashamed to be idiotic in the constructive talent, who would be ashamed of themselves if suspected of defectiveness in any other talent.

Drawing on the blackboard in school, under the right guidance, would be an excellent exercise for the faculty of Constructiveness, as well as for those of Form, Size, Weight, and Ideality. Then the man who has his constructive talent cultivated, knows how to keep his house in order. If a lock or a latch refuse to do duty, he will instantly see what the trouble is, and how to remedy it, and his fingers will not be all thumbs. It is a source of great delight to a man who has cultivated his Constructiveness, theoretically even, so that he knows the principles on which every kind of mechanical work is based. Then he knows when people are doing his work properly, or whether, in constructing a bridge or balcony, they are

carelessly and awkwardly making a trap for the breaking of his neck or his leg. We therefore recommend the cultivation of Constructiveness, theoretically if not practically, as a means of mental culture and breadth of thought.

Those who expect to follow mercantile pursuits may suppose that the culture of Constructiveness, though indispensable to the mechanic and manufacturer, is not necessary to the merchant; but as most articles of merchandise are the embodiment of mechanical skill, he is most likely to succeed as a merchant who best understands those qualities.

HOW HE FOUND HIS TRUE PLACE.

As an illustration of the value of Constructiveness, and also to show that Phrenology is the proper guide to the choice of occupation, I may mention a fact recently reported to me. A gentleman brought his youngest son for examination in April, 1876, desiring to know what he ought to follow as a business; and when the examination was over, he remarked that he brought his older son, eleven years ago, to have a written examination of character made, and said that I told him he ought to learn architectural drawing. That since he had the organ of Constructiveness large, the talent for invention, mathematical accuracy, and artistic taste, he could take a high rank in that field of industry. The gentleman said that his son had declined to engage in it, and for eight long years had been changing from one pursuit to another, finding nothing which gave him success or satisfaction. Three years ago he came to the father and said he had concluded that perhaps he had better follow the advice of the phrenologist. The father found a place for him to learn architectural drawing, and now, three years only having passed since he first took the pencil, he is earning a salary of fifty dollars a week, and the father added, "If all thought as much of Phrenology as I do, your rooms would be crowded."

IDEALITY.

THE SENSE OF REFINEMENT, TASTE, AND ART.

This faculty relates to all that is beautiful, perfect, and refined. If we look at it rightly, nature is full of beauty. Every meadow and hill-side sparkles with it. The summer sunset glows with it, and the canopy of Heaven reveals it. To bring men into harmony with all that is splendid, elegant, and beautiful in nature or in art, which is so lavishly and beneficently spread out before us, this faculty is given to appreciate it as the eye takes in light, or as Tune perceives melodies and harmonies. As Alimentiveness is adapted to nutriment, as Cautiousness warns us of danger, as Combativeness imparts the desire to defend ourselves against assaults, so Ideality gives a taste for the elegant, the polished, the refined, the perfect. It is one of the elements of imagination, and acting with Spirituality and Constructiveness, gives invention or creative fancy, and is useful to the mechanic, and indispensable to the poet and the artist. It is located in the upper part of the temples. See Fig. 23, p. 188.

The outgrowth of this faculty may be witnessed in all the articles of elegance and ornament. We are not satisfied to have things simply strong. Even the plow that turns the unwilling sod must have its beautiful curve, its elegant and harmonious proportions, and its finish. The mighty engine that thunders over the plain, or plows the ocean, receives from its maker evidences of his sense of beauty in the graceful forms and elegant proportions with which the giant arms of the machinery are modeled.

The faculty is generally stronger in women than in men, as is also the organ of Color. Perhaps it is better cultivated in girls than in boys, and for that reason becomes more active and strong.

This taste for art, elegance, and beauty is wide-spread

The rude Indian, with a coarse yearning for something fine, paints his face with florid colors. The savage tattooes his face with blue and red lines. To those who are more cultured, his ornament is simply rude caricaturing. In the more polished nations their manufacturers become thoroughly artistical. There are few articles sent from France or Italy that do not savor of art. They are the outgrowth of Ideality.

QUAKER SIMPLICITY.

There is more or less reaction always against excess. When religious ceremonies became too ornate, and the dress and the style of living were made too ornamental for sound sense, the Quaker went to the other extreme and refused colors warranted by nature, and repudiated the sentiment of taste and decoration which are suggested and yearned after by the normal faculties of the mind. Of course there is an extreme in decoration. All the colors of the rainbow are sometimes employed in setting off beauty to advantage. We believe in ornamental architecture, but would have first a sound and solid foundation. The very school-house should have its cornice, its column, its ornamental panels, according to a refined and decorative architecture, so that pupils may see in the very forms and structures of the rooms they occupy evidences of taste and refinement in their builder, and these can not but minister to his taste and good manners. Even the pocket-knife of the restless school-boy will retreat abashed from the nicely-grained bench or door; but rude pine wood, unpainted, seems worthy game for a sharp knife, and we can hardly blame the boy for treating with contempt that which deserves contempt. If the school-room be properly decorated, the school-boys will not incline to decorate it with their initials, whittled into the wood.

We would urge the cultivation of Ideality, then, upon all

who have charge of the education of the young. A vase of flowers in the school-room, a picture which speaks of refinement, teaches delicacy of thought and sentiment, and may be a God-send to many a child who has not the opportunity of seeing such things at home. By teaching children refinement of thought and feeling it will be easy to inculcate elegant and polished modes of expression, as well as general courtesy and refinement in manners. The teacher who is particular to use correct and even elegant language, and whose manners in the school-room are refined and polished, as well as dignified and imbued with moral sanctity, will impress the pupils with the spirit of elevation, delicacy, and courtesy which will mould their manners and their morals for life, and make them standing models for all who feel their influence.

SUBLIMITY.

This organ is located next to that of Ideality, backward, and for many years that whole section of the head was treated as a single organ. It was called the love of the sublime and the beautiful; but sublimity does not necessarily involve beauty. The rugged mountain of granite-rock, without a single green thing upon its bare face, furnishes food for this faculty. The crashing thunder of the storm, the hoarse howling of the tempest, the roar of the ocean, and its fierce warfare with the rocky shore—whatever is bleak, barren, and majestic, though full of magnitude and strength—gratifies this feeling.

If one will read the poets, he will find evidences of this feeling in his authors. Shakespeare speaks of the raging storm—

> "That takes the ruffain billows by the top,
> Curling their monstrous heads and hanging them
> With deafening clamor in the slippery clouds."

While Ideality, in the elegant language of the poet, Pope,

> "Warms in the sun, refreshes in the breeze,
> Glows in the stars, and blossoms in the trees."

Children may be taught, very properly, that every work of the Creator, every mighty evolution of nature, is the handiwork of the Almighty, and should be regarded with admiration as a part of the great plan of creation and of life. Sublimity and Ideality are near neighbors. They belong to the poet, but they are as far apart in their language as the rugged granite is different from smiling beauty.

IMITATION.

Located outward from Benevolence. (See Fig. 28, p. 226.)

Men are creatures of imitation as well as of habit, and the most of that which they learn comes through Imitation. The child likes to do that which it sees older brothers and sisters, playmates, or parents do. The little four-year-old girl watches the mother as she handles and cares for the babe, and she tries to repeat the processes with her doll; and we have no doubt that children who play "keep school" on the front steps of houses, try to repeat the methods, especially of training and government, which they have seen practiced by the teacher at school, or the mother at home. When we see a child thus playing keep school, or keep house, making free use of the stick, and stamping with the foot, and speaking with a sharp, scolding voice, we do not need an affidavit from anybody to prove that she has seen or heard the same thing at home, or in school. We remember to have seen such a little group of Quaker children playing "keep school." There was no harsh tone to the voice in giving orders and issuing mandates, but we stopped long enough

to hear the little girl-teacher say, "Mary, I am surprised to see thee so restless and rude. Pray change thy conduct!" By that time the children discovered our presence, and of course there was recess in their mimic school, and we walked on.

The child imitates motions, tones of voice, manner of expression and of emphasis in conversation, style in music, mode of working, eating, everything; yet there is an original, constitutional disposition in each person which will assert itself. But as children have a chance to imitate their brothers and sisters, or their parents first, those whose blood and disposition are analogous to their own, that which comes most natural for them to do, they see done by their superiors; but whether a child shall feed himself with his fingers, or with chop-sticks as the Chinese do, or gracefully use the knife and fork at the table, must of course depend upon the example which is set before him. If children are permitted to "eat like pigs," as a good grandmother in her vexation might say; if no care be taken to set a correct example for them to follow, they will eat awkwardly, and not be very likely to give up the habit after they have attained the age of manhood. Let one stop at a hotel, where people from all sections of the country come to eat and drink, and see how differently they do it. One man shovels his food into his mouth with his knife, and the edge of it toward him at that; another will have an improvement by turning the edge the other way; another will eat with his fork, but not gracefully; another will eat with all the graces that belong to the table. Fifty years ago people poured their tea into the saucer to cool, and drank from that. It is said that Jefferson, while he was Secretary of State, was dining with Washington, and they were discussing the propriety of having a Senate as a branch of the National Legislature. Jefferson asked Washington why a Senate was necessary?

At the same time he poured some tea into a saucer, and Washington, with his long finger, pointed at it and said, "You have answered the question by pouring that hot tea from the cup into the saucer. Let the House of Representatives pass a bill in its haste, and pour it into the Senate to cool it." Whether that illustration converted Mr. Jefferson to Washington's view as to the value of a Senate is not certain, but certain it is that a Senate has remained an undisputed branch of the Government as at first established.

Men of different nationalities, learning to talk from parents and neighbors, speak of course like those from whom they learn to talk; hence it is that we readily note the speech of an Englishman, and detect the peculiarities of his tongue. A Frenchman, a German, or a Spaniard who talks English will reveal the peculiarity of his voice, and his method of pronouncing certain words incident to the vocalization of his own language. A person who lives in certain parts of England, and hears his seniors putting the *h* before the *a*, the *e*, and the *o*, where it ought not to be, and not putting the *h* before the letters where it ought to be, does the same thing as a result of imitation. We knew a man who had two daughters, Ann and Harriet. He would say, on coming home, "Hann, where is 'Arriet?" or "'Arriet, where is Hann?" We have always wondered why he could not put the *h* before the *a* in Harriet, and leave it off as well in speaking Ann as he did when speaking the name Harriet. To show how ridiculous this method of imitation is, when it is made to appear in a strong light, we may give this instance. An Englishman was asked how he spelled the word "saloon," and he replied: "With a hess, and a hay, a hel, two hos, and a hen."

While we are laughing over that, let us remember that we Americans have learned by imitation, in other directions, either in speech or in conduct, that which is quite

as incorrect, if not so ridiculous. In some parts of New England people speak with a marked nasal twang. When men go away from the sections where people talk through the nose, and hear others speak who do not thus mar their language, they gradually imitate the new method, and on going back home, after years of absence, their friends recognize with astonishment the change of speech in the one who has been abroad.

There are a thousand ways in which the faculty of Imitation shows itself in character, not always recognized by the observer. Among the more generally accepted modes of showing it are mimicry, assuming character in acting, boyish monkey-shines, facial contortions to resemble particular characters, personating people or animals by pantomime, and gesticulating in speaking, suiting the action to the word. Deaf-mutes are adepts in imitating the actions of animals and of persons, processes, phenomena, etc.

Under the head of Tune this thought is brought out, as to the peculiarity of expression and the recognition of it. If a boy be put to penmanship, he tries to imitate the copy; if put to a trade, he watches the master, or the older apprentices, to see how they work; and so far as his constitution and mental quality will permit, he will learn to work as they work, so that one can tell where a young man learned his trade, if acquainted with all the shops in the vicinity.

In cities people dress richly and fashionably, and imitation leads people in the country to follow city fashions. Sometimes this blind fashion-worship crops out most fantastically. Fashion-mongers have only to publish a picture with the hair braided and piled up on the top of the head, or hanging in loops at the neck, or frizzed in front, or hanging in ringlets at the sides, or combed over large rolls and made to stand like a pyramid; no matter how strange, and troublesome, and peculiar the style, if it be

the style, or fashionable method, most people try to imitate it. Such practices sometimes look queer. For instance, when tall, thin persons are represented in the fashion-plates with *panniers*, or other methods of building out the figure, persons who are already exceedingly stout, with short neck, and broad, square shoulders, are unwise enough to copy the efforts of thin people who seek to make themselves look sufficiently stout, and they add to their super-stoutness that which makes them grotesque; but it is the law of fashion, the outworking of imitation. When the great hoop-skirts were worn, so that the head and chest looked like a small figure set on a pyramid, the very short, stout people would adopt the largest kind of hoops, and their shortness and exceeding breadth of outline made them look very ridiculous. Some thin faces will permit a narrow-brimmed hat without seeming ridiculous, but a full-moon face, with broad body to match, wearing a sugar-loaf hat with brim half an inch wide, provokes laughter.

IMITATION A SNARE.

Thus imitation may be abused in a thousand ways. A young man goes among others who are dissolute. They smoke. He tries to smoke, not because he likes to do it, but because his associates do it, and he thinks he must imitate their example. He finally acquires the bad habit, most offensive to himself and to the good taste of others, damaging to his health and depleting to his pocket, but he feels that he might as well "be out of the world as out of fashion." He sees others drink. He can not afford it, nor does he desire it, and perhaps has been taught and trained at home to deem it unwise and improper, yet he puts on a wry face and takes the rye-whiskey, and finally learns to like it; and some other person, as innocent and as foolish as he was, will imitate his example. Thus men

wheel into line. Each man keeps step with his predecessor, whether in the way of ruin or in the line of higher and better life.

IMITATION AN EDUCATOR.

Imitation is an educating faculty. It gives an aptitude for doing things as others do them, and thus when the father, mother, elder brother, or sister sets a good example for the little one, it is pleasant to see him take on the excellent ways and manners of his seniors. Hence Solomon says, "Train up a child in the way he should go, and when he is old he will not depart from it." But he says, "Train up a child in the way he *should* go." It certainly would be safe, and thus trained he will be likely to follow in that path. Imitation leads to usage, and usage produces habit, and habit is second nature. Some men have said, "Tell me who brought him up, and I will tell you what he is." But Imitation can not overcome or set aside the original mental nature. There is a constitutional difference in people in their mode of dancing, fencing, walking, penmanship or workmanship. If an Irishman and a German were to exchange children at the age of six months, it would not change the blood or the nature; but the Irish child would use the German language, and the German child would use the Irish brogue, and would take on the Irish ways, and would think they were right, as the Irish child would take on the German ways and approve of them. Yet each child would have native peculiarities of disposition that would be much modified in the conduct by the force of example.

We have noticed that churches are very apt to follow the manners of their ministers. There are in the city of Brooklyn, N. Y., two churches of the same denomination, which are contiguous to each other. They have had, for a considerable number of years, a pastor in each, and the

people have had time to become molded by the pastors. In one the pastor has a brave, earnest voice. It amounts almost to harshness. His manner in the pulpit is brusque and very earnest, and sometimes almost rude, and the manners of the congregation correspond. As soon as the benediction is pronounced, the people will talk to each other, and use slang phrases; and as the congregation passes out, there is a free-and-easy, common-place manner among them; they shake hands and talk loudly, and a person passing when the congregation is coming out, would think that a concert, or any assembly but that of church-services, had been in session. The minister of the other congregation has a gentle, refined, dignified, smooth, classical, scholarly style; and the people, who are as strong, and brave, and broad-shouldered as those belonging to the other congregation, have taken on the manner of their pastor. They speak with suppressed voice, are quiet and gentle in their ways, and their prayers and exhortations partake of the characteristics manifested by the pastor.

Who does not know that Methodist ministers, who go traveling from town to town all through the land, meeting each other in conference, have certain intonations, certain ways of speaking, which they can not shake off in the court-room, or in the legislative hall. A man who has been a Methodist exhorter, and has taken his cue from the presiding bishop, elder, or pastor, will always be recognized as a Methodist, even though he become a legislator or governor.

These things come through the faculty of Imitation, and it requires but a single word to enforce the moral of its utility. Let the teacher, the parent, the elder brother do and say in the presence of the young, plastic, growing child, that which he would have the child do, say, and be when he comes to man's estate.

MIRTHFULNESS.

ITS INFLUENCE AS AN EDUCATOR.

Man is the only being that laughs; and although wit may be used as a lash with which to scourge others, and though it may be made the basis of frivolity, it nevertheless is a human trait, joy-bearing in its nature, and rightly used is an aid to virtue and morality. Certainly it is an educator, for who can stand before ridicule and not be ashamed of impropriety and indecorum? This faculty, under the influence of the moral sentiments and the intellect, may be made salutary when used to shame error and impropriety out of countenance and compel a reform, which would otherwise be out of the question. The organ of Mirthfulness is located at the upper and outer angles of the forehead, giving width, fullness, and squareness to that part of the forehead.



FIG. 36.—J. Q. CANNON. Mirthfulness Large.

DEFINITION OF WIT.

No subject is better appreciated than wit, or Mirthfulness. All who are not unfortunately deficient in this respect, seem to know what it means, yet there is great difficulty in defining it. In the mind of man there is a primitive, independent faculty which enables him to enjoy sport and gayety, and appreciate the witty, the ludicrous, the comical, the incongruous, the eccentric, and the absurd. It is not permitted to the lower animals to laugh, or to comprehend the causes of laughter; and though animals often do that which excites laughter in men, they do not seem to perceive that they have done anything ridiculous or mirthful; though

sometimes animals seem ashamed when they are made the subject of laughter, but this arises from Approbativeness, not from Mirthfulness.

The reason why writers differ so widely in the explanation or definition of wit, is that the faculty acts through, or in conjunction with, so many combinations of faculties, that the wit of no two persons seems alike. At one time we find it sparkling in the pages of a pleasant author; at another time in the good-humored sallies of a friend. Again it is found in skillful caricature, or inflicting its bitterness in biting sarcasm, and stinging us through pungent satire. One of the wittiest definitions of wit is that of Henniker. On being asked by the Earl of Chatham to define wit, he answered: "Wit, my lord, is like what a pension would be, given by your lordship to your humble servant—*a good thing, well applied.*"

Phrenology throws light on the subject of wit, and explains the various phases of it. One who has large Imitation and but little Self-esteem, will show his wit by caricaturing, and by making absurdities or exaggerated imitations of other people's conduct. Ludicrousness—in word, action, or dress—causes laughter in the observer; discrepancy excites mirth; and Comparison, appreciating the unfitness, excites the spirit of ridicule in the observer, and he laughs. Speaking in general terms there are three phases of laughter-provoking topics. First, that which is utterly *absurd* and incongruous, and the actor does not know it. Second, that which is *ridiculous* or droll—something containing wit on the part of the doer, such as comic acting, and playing the part of the fool on the stage, or on paper, or showing up the folly of people for the amusement of others. Third, that which is *really witty,* and neither absurd nor ridiculous, and which may not always provoke laughter. Wit may have mixed with it every species of quality, according to the faculties with which

Mirthfulness may combine. Acting with one set of faculties, it becomes satire; with other faculties, it has philosophy; with others, flattery, affection, taste, refinement, or philanthropy.

THE ABSURD.

The first form, or that which is absurd, is illustrated by the man at a public educational dinner, who thought he was offering a smart or witty sentiment when he proposed "the three R's—Reading, 'Riting, and 'Rithmetic." As others had sometimes given three M's or three D's in a similar manner, he thought he had found an appropriate association of alliterative initial letters, but his ignorance of the method of spelling two of those words being recognized by all present but himself, and being so innocently made on his part, excited laughter. There was, of course, no wit in the three R's as applied to the three words referred to, but laughter was excited in those who appreciated the absurdity of the ridiculous blunder. There is nothing more laughable than an effort at smartness that fails. Innocent ignorance is ludicrous, and that which is incongruous, or ill-adjusted, is an occasion for laughter.

BULLS AND BLUNDERS.

A bull or blunder must be genuine, or at the moment supposed to be, in order to amuse us by its incongruity. A few examples may be mentioned.

The first printed article of a burial society in Manchester, England, read thus: "Whereas, many persons find it difficult to bury *themselves*."

When Lord Eldon, in the British Parliament, brought in a bill for abridging the liberty of the press, a member moved, as an amendment, "That every *anonymous* work should have the author's name printed in full on the title-page."

This reminds us of an Irish boy, once employed in our

office, who wrote, "Fac-simile of the handwriting of C. L., written by himself."

An Irishman being asked what he meant by the word coffin, said, "A coffin is the house a dead man lives in."

A merchant, having suddenly died, left on his desk a letter to one of his correspondents, and his sagacious clerk, seeing it to be necessary to send the letter, wrote at the bottom, "Since writing the above I have died."

A German merchant in a western town, who could speak English, but could not write it, employed his boy to write his letters to those whom he dealt with in New York. In December the firm in New York received a letter from the western German house:

"Messrs. C., M., & Co.:—Please find enclosed check for $——, in full of account to date. Will you have the kindness to send to my poy a small Christmas present. He writes all my letters, and he writes this one too.

"Yours truly, R. G."

The ludicrousness of these instances, it will be seen, consists in the incongruity of the expression of the objects desired or intended by the persons. The same principle may be applied to the following epitaph in a Chichester, England, churchyard:

"Here lies the body of John, the only *surviving* son of John and Mary Thompson."

Said the foreman of a jury, after the charge by the judge, before retiring to consider their verdict, "I believe, your honor, I understand all the *rules* that have been laid down; but there are two terms of *law*, that have been a good deal used during the trial, that I should like to know the meaning of. I mean the words *plaintiff* and *defendant*."

Sir Boyle Roche's habit of blundering was a source of infinite amusement to his fellow-members of Parliament. A few instances will illustrate this phase of his mirth-provoking absurdity:

"Sir," said he, addressing the speaker, "I smell a rat brewing in the storm; but mark me, I shall yet nip him in the bud."

"Single misfortunes never come alone, and the greatest of all possible misfortunes is generally followed by a much greater."

When contending for the proper dimensions of the wine-bottle, he proposed to Parliament that it should be compulsory that "every pint bottle should contain a quart."

"I don't see, Mr. Speaker, why we should put ourselves out of the way to serve posterity. What has posterity done for us?" Disconcerted by the burst of laughter that followed, he proceeded to explain his meaning by saying, "By posterity, sir, I do not mean our ancestors, but those who are to come immediately after them."

So much for Sir Boyle.

The officers of a famous Irish regiment were dining together during the war, while investing Richmond. Captain Murphy offered as a sentiment, "The Sixty-ninth, equal to none." The roar of laughter which followed this, aroused him to a fresh effort—to say something which would retrieve his own blunder and the apparent disgrace of his regiment; and as soon as he could make himself heard, he shouted, "The glorious Sixty-ninth, the last in the field and the first to *lave* it."

An Arkansas soldier, who was wounded in the leg at the battle of Buena Vista, asked an Irishman to bear him off the field. The latter did so by assisting him to mount and strapping him on his horse, Pat getting astride in front of him. During the ride the wounded Arkansian had his head cut off by a cannon-ball, unknown to Pat. Arriving at the surgeon's quarters the Irishman was asked what he wanted.

"I brought this man to have his leg dressed."

"Why," replied the surgeon, "his head is shot off!"

"The bloody liar!" exclaimed Pat, on looking behind; "he tould me he was shot in the leg."

On a certain American railway the following notice appeared:

"Hereafter, when trains moving in opposite directions are approaching each other on separate lines, conductors and engineers will be required to bring their respective trains to a dead halt before the point of meeting, and be very careful not to proceed until each train has passed the other."

One of the drollest of blunders was that made at a public meeting on the subject of building a jail, which

"Resolved: 1st. To build a new jail. 2d. To use the materials of the old jail with which to build the new one, as far as they would go. 3d. To keep the prisoners in the old jail until the new one was finished."

There is a class of cases in which the absurd and the witty are combined. When one is caught in a blunder or mistake, and with dexterous mental skill prevents any inference being made to his disadvantage, he manifests wit—a clear, quick appreciation of the ridiculousness of his position, and a sharp turning to get out of it, showing wit on his part.

It is related of a raw son of Erin, that at his first effort to saddle a horse, he put the saddle wrong side before; and when some one told him that the saddle was put on the wrong way, the instant he became aware of it, he replied: "Arrah, but how do you know which way I am going to ride?" There was wit on his part, but it is not that which excites our mirth. It is the ludicrous idea that he should suppose the horse would accommodate himself to the saddle, instead of the saddle to the horse.

Brilliant wit on the part of an individual excites our admiration, and we appreciate his wit; but things which most excite our laughter, which are most superlatively

ridiculous and funny, are those that contain no wit at all. They are simply absurd.

Mr. Combe tells a story of a Nottinghamshire inn-keeper, named Littlejohn, who put up for a sign the figure of "Robin Hood," and below it the following lines:

> "All you who relish ale that's good,
> Come in and drink with Robin Hood;
> If Robin Hood is not at home,
> Come in and drink with Littlejohn."

Mr. Littlejohn, after having made his place famous and his business a success, died; and the man who succeeded him thought it was a pity to lose so good a sign and such excellent poetry, which had given the house a pleasant notoriety and brought its owner prosperity. He accordingly determined to retain both. This he could not do without erasing his predecessor's name and supplying his own name in its place. This he procured to be done, and the lines then read:

> "All you who relish ale that's good,
> Come in and drink with Robin Hood;
> If Robin Hood is not at home,
> Come in and drink with *Samuel Johnson*."

The wit of the original did not excite laughter, for it consisted in the fact that Mr. Littlejohn, bearing the name of Robin Hood's associate, appropriated for his house the name of "Robin Hood," so that he could work his own name in as the special friend of Robin Hood. The wit was appreciable; but when Samuel Johnson thrust his estimable name in, the incongruity was obvious and therefore laughable; but the wit was in the one who laughed, and not in the man who was the occasion of the laughter.

ABSURDITY CAUSES LAUGHTER IN OTHERS.

Wit, sparkling and brilliant, may excite laughter; but there is, in whatever is droll and absurd, a great deal more that provokes laughter by those who have the element

of wit sufficiently to appreciate the incongruousness of the statement. Sometimes Benevolence is exercised in conjunction with Mirthfulness. Sometimes Ideality joins with Mirthfulness. Sometimes Approbativeness, or Secretiveness, or Amativeness. Sometimes all together, as when the Irish hod-carrier rescued the lady's parasol, which was being blown away, and handing it to her, said, "Och, if you were half as strong as you are handsome it never would have got away from you." She replied, "I do not know which most to thank you for, your compliment or your kindness." He retorted, "Niver mind, a single glance at your beautiful eyes repays me for both." And he went to his work. He embraced the opportunity for saying a brilliant and pleasant thing, without being rude, and we admire it more than we laugh at it.

THE RIDICULOUS.

Another class of witticisms take the form of satire, or sarcasm, in which the ridiculous is brought out. This originates in the coöperation of Destructiveness, Combativeness, Self esteem, and Mirthfulness—the latter being simply the mouthpiece of the other faculties. Thus, when provoked, people are apt to give sharp cuts, using wit as the cutting edge, while their victims are made to figure in a ridiculous light. An example or two of this kind will illustrate the subject.

A so-called poet had, with laborious and useless ingenuity, written a poem, in which he had avoided the use of the letter *a*. He read it to the king, who, tired of listening to it, expressed his thanks to the poet and his approbation of the omission of the letter *a*; but added that the poem, in his estimation, would have been all the better if he had omitted all the letters of the alphabet.

Here the wit becomes severity, but it is done in a sly way, because Secretiveness was one of the counselors.

Sheridan, the great Irish orator, was greatly annoyed by a fellow-member of the House of Commons, who would frequently, and inappropriately, cry out, "Hear, hear!" Wishing to silence the brawling member, Sheridan took occasion in debate to describe a politieal contemporary that wished to play the rogue, but only had sense enough to play the fool. "Where," exclaimed he, with great emphasis, "where shall we find a more knavish fool, or a more foolish knave, than he?" "*Hear! hear!*" was shouted from the troublesome member. Sheridan turned around, and thanking him for the prompt information, took his seat, amid the roar of the House.

GENUINE WIT.

We regard as unsurpassed, in the whole realm of wit, this instance:

Two sons of the Green Isle, as they were traveling, eame in sight of a gibbet, or gallows; and as it seems to be a standing joke among the Irish to rally eaeh other on the subject of hemp, hanging, and the gallows, one of them said to the other, "Pat, where would you be if that gallows had its due?" "Oeh," he replied, "I would be walking alone."

Whoever ean retort a sharp joke, which was intended for him, upon his adversary; he who ean hurl back, or break his enemy's weapon over his head, or hang Haman upon the gallows he erected for another, shows wit, of eourse, but wit acting through the less amiable faeulties of his nature. There is a class of jokes arising from Mirthfulness, Comparison, Approbativeness, an abundance of Friendship, and Seeretiveness, with a slight touch of Combativeness, while Destructiveness is entirely left out of the question. These are shown when one person good-naturedly aims to praetiee an innoeent joke or witticism at the expense of his best friend, knowing that it will be taken kindly.

In our office there was a leaky gas-pipe, and one of the persons connected with the office, with a long pole and a lighted taper fastened to it, was trying to find where the gas was escaping, when Dr. W., a very sociable and mirthful man, who happened to be present, started up and said, "I'll tell you where to put it." The torch-bearer, catching the spirit of the joke, threw down his torch, and interrupting the Doctor, said, "Had I known *you* were here I would not have hunted for the gas-leak." The Doctor was too full of his joke to speak quickly and say, "Put the torch to your mouth if you want to find the leak," and thus gave his friend time to turn the tables on him. The Doctor has told this story at his own expense for twenty years, probably a hundred times, and it gratifies his Mirthfulness quite as much to tell the joke at his own expense as it would have done had he been quick enough to throw the joke on his friend, as he intended.

One of our young men was nailing up a case of books, when the torch-bearer, above referred to, happening to pass, inquired of the man whether, by striking heavy blows, he could not save time? The reply was, "Yes, if the hammer were as hard as your head!" "Or," said the other, "if the board were as soft as yours!"

The retorting of one's joke upon himself, and making it applicable on the instant, indicates the wit. When a person is driven into a corner, as it were, and can manage to catch his opponent's arrow, and throw it back at him effectively, it shows the highest type of wit.

WIT IN SATIRE.

The richness of the wit, and the pungency of the satire, will perhaps be an excuse for the sharpness of the following: Sir William Congreve, the inventor of what is known as the Congreve rocket, and other fireworks, was one day walking with a lady in a churchyard, and they came across

the epitaph of a great musician, containing this pretty sentiment, which they greatly admired: "He is gone where, alone, his music can be excelled." The lady remarked, "Sir William, that epitaph needs to be changed but in a single word to be applicable to you." "Ah," he replied, "Do you think so? Which word is it, pray?" "The word *fireworks* in the place of music," was the quiet, but mischievous reply.

USEFULNESS OF WIT.

Wit is useful in promoting good manners, correct conduct and deportment, and the avoidance of that which is eccentric and unusual. The faculty takes special cognizance of whatever is odd, droll, comical, eccentric, or differing from that which is usual. If one comes into a place with unfashionable garments, with a short-waisted, swallow-tail coat, when everybody else wears long-waisted, broad-skirted coats; or if one appears with a narrow-brimmed, bell-crowned hat, when the style is to have a broader brim and a straight crown, or whatever else is a caricature upon custom, excites a tendency to ridicule, and tends to scourge delinquents to conform to usage. We must confess, however, that wit is sometimes the occasion of a breach of good manners. To some a joke is so rich that they will sacrifice friendship and good breeding, as well as good morals, to enjoy it.

ODDITY NOT WIT.

On the stage nothing more excites fun, or awakens the spirit of ridicule, than a man who is oddly dressed. Whatever is grotesque excites mirth, not because it is witty, but because Imitation, Comparison, and Perception recognize the eccentricity, and employ Mirthfulness and other faculties in appreciating and ridiculing the eccentricity.

An odd way of spelling, after "Artemus Ward," "Josh

Billings," or the inimitable "Petroleum V. Nasby," excites, through Comparison, a great deal of mirth; but the power of their work lies in the wit and humor which inspires their thought. Many persons can never see another meet with an accident, even though it be a cherished friend, without looking at it in a ludicrous light. If a man stumble or fall, without hurting himself, nine out of ten would laugh inwardly, if not outright, to see the elegant hat soiled, or the immaculate gloves smouched, especially if the man were one of the elegant sort, whose pride is in his clothes and stately walk. Some of the funniest picture-books are a compilation of accidents, blunders, and mishaps. Who has not laughed heartily at "John Gilpin's ride," so full of danger and terror to him, and to every one on his route?

Another use of Mirthfulness is to give us an appreciation of the ridiculous, so that we shall be led to avoid it in our conduct; and the more amply developed this faculty is in a man, the more keenly will he appreciate the pain of being ridiculed. Mirthfulness leads people toward good taste, by showing them that which is incongruous, and awakening a disposition to avoid it; while Ideality, located just behind it, gives a tendency to cherish the beautiful, the harmonious, and the perfect.

ANIMALS LUDICROUS, BUT NOT WITTY.

We have said that animals never laugh, but their ludicrous conduct often provokes laughter in us. We once saw a big, awkward, three-quarter-grown dog running and playing with a brisk, little dog, not a fourth part his size. They were on a lawn, above a high bank on the road-side, directly in sight of the village, which was on the opposite side of the road. The little dog ran with all his speed directly toward the brink. The large dog followed him honestly, earnestly, and with all his momentum; and when

the little dog was just at the edge of the precipice, he instantly turned aside, and the big dog went over and rolled down the bank of sand and gravel like an avalanche, taking perhaps half a cart-load of dirt with him; and sixty feet from where he started he got up, shook the gravel out of his ears, and looked up at the little dog that was looking over the brink at him, while every man, woman, and child in the village that saw it were convulsed with laughter. The dogs looked each other in the face with all the sobriety imaginable. The little dog did not seem to know that he had played a good trick on the big one, nor did the large one feel that he had been sold and had made a ridiculous figure; and he laboriously climbed up the steep bank, and the two dogs lay down at the top, and panted, rested, and meditated together.

Animals make fun for human beings, but they have no appreciation of wit or sense of fun themselves. Secretiveness leads them to dodge and circumvent each other, but they do not see the drollery. We see it, and laugh at it.

WIT AN EDUCATOR.

No weapon is stronger than wit and ridicule in the way of making wrong-doing and meanness odious. Many people, who have a weak conscience, can be made to feel the lash of sarcasm and ridicule; and the cause of morality and religion has a right to act, through any of the human faculties, to produce an aversion to vice, and to make the way of the transgressor hard.

Dr. Gall, in endeavoring to convey an idea of the faculty which produces wit, speaks of the writings of Racine, Swift, Sterne, and Voltaire; and to this list we might add Neal, the author of "The Charcoal Sketches;" Seba Smith, author of "Major Jack Downing;" the writings of Horace Mann, though full of sound philosophy and beaming with beneficence, also sparkle with wit, and gleam with holy sarcasm against insolence, vice, and rapacious selfishness. Mirth

fulness enters largely into the writings of Washington Irving, Charles Dickens, James Russell Lowell, and is evinced also in the writings of the more modern humorists, whose names will readily occur to the reader.

Among the most successful lecturers and preachers, we could name many who have been remarkably devotional, and at the same time endowed with wit, and who would use wit as a means to punish vice and immorality, and sting meanness, and lash error into shame and repentance.

WIT IN THE SCHOOL-ROOM.

We remember several teachers who were remarkable for controlling their schools, and working up a spirit of enthusiasm, in all that related to good behavior and eminent advancement in scholarship. One in particular would do this by ridiculing the reverse of what he desired his pupils to do and to be; and when he had anything in the way of discipline to accomplish, he would employ his own wit, as well as the wit of the school, and awaken a sense of the ludicrous and the absurd in the delinquent; and when he had passed through such a course of discipline it would be the last one he would ever need, and no other member of the school would be willing to walk in the same footsteps. He had taught for twenty-two years, and all the districts within ten miles of him desired his services. He would carry the school, as it were, in the hollow of his hand; could tell one story that would convulse the school with laughter, and another that would melt them to tears; but his will was law, and it was a generous will, a kindly nature. He knew how to teach and how to govern, and the whole school would be on the *qui-vive* to do his will, and to perform duty fully. He used the organ of Mirthfulness as a means of discipline and of happiness in the school. He was known as "Master Bell." His memory is fragrant in many a thankful heart.

CONSCIENTIOUSNESS.

No other faculty, or sentiment of the mind, exercises a more commanding influence than that of Conscientiousness. It gives to man that feeling which hungers after righteousness, which loves truth for truth's sake, that believes in duty, rectitude, moral obligation, and ethics. It does not, alone, teach us infallibly what is right, but it gives an intuition toward right motives. The location of the organ is on each side of Firmness, and Firmness is in the middle line of the head, just forward of the crown, and when Conscientiousness is large, it elevates and broadens the head at the region of its location. If we draw a line from the opening of the ear, directly upward, it will pass over the front part of Conscientiousness, located outward from the center line about two inches. When the organ of Conscientiousness is small, the head is sloping and narrow at that region.

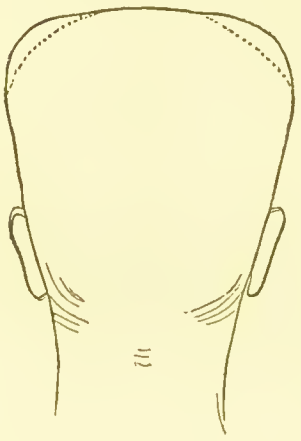


FIG. 37.—CONSCIENTIOUSNESS.

The size of the organ is determined by the height of the head from the opening of the ears to the location. Some heads are very low throughout the entire top-head, indicating a feeble development of all the moral organs.

CONFLICTING IDEAS ABOUT CONSCIENCE.

There have been conflicting opinions among writers on mental philosophy as to whether Conscientiousness is a primitive faculty. Mandeville asserts that men do right for the *love of praise*, and that they sacrifice selfishness to the public good in order to be praised, and that sacrifice

he calls virtue. Hume maintained that "utility is the constituent or measure of virtue;" that a man gives up a lesser or temporary pleasure for a greater; that he never seeks good and truth as such. Dr. Paley, one of the most popular authors on moral philosophy, does not admit a natural sentiment of justice as the foundation of virtue, but claims that virtue consists in "the doing of good to mankind in obedience to the will of God, and *for the sake* of everlasting happiness." Dr. Adam Smith, in his theory of the moral sentiments, maintains that "the standard of moral approbation is *sympathy* on the part of the spectator with the action and object of the party whose conduct is judged of." Dr. Clarke, Lord Kames, Mr. Stewart, and others, recognize the existence of a moral faculty which produces the sentiment of right and wrong, independently of any other consideration, and this is the phrenological idea. But we go farther than these, or any other mental philosophers, in this, that we locate the organ and undertake to determine who has this feeling strongly marked in his character, and who is unfortunately deficient in the sentiment of natural justice.

CULTIVATION OF CONSCIENTIOUSNESS.

The element of conscience and moral duty may be cultivated in the young, and the highest and best results hoped for; or it may be neglected, and the cultivation of the character, in other respects, be conducted in such a way as to inflame the animal propensities and selfish sentiments, and thus lead one away from virtue. Parents and teachers should start with the idea that the young who are under their care, having had stamped upon their nature, by the Creator Himself, a sentiment of right and justice, they must appeal to this in their system of training and culture, that there may be raised in the child's mind a standard of justice and virtue which will enable him to regu-

late his own conduct. Consequently, whenever a fitting opportunity occurs to the mother or the teacher, it should be improved to illustrate and intensify the true, the just, the dutiful; and when occasions occur where selfishness prevails in the manifestations of character and conduct, it is an excellent opportunity to show to children the difference between acting from conscience or from selfishness. An ingenious mother or teacher can invent illustrations to show the power and worth of virtue.

Honesty, indeed, is the best policy, and the only true policy. It might, perhaps, be said that honesty is above all policy. The most eminent merchant in the world instituted, in his immense business with the public, uprightness and integrity. His goods were marked at a proper figure, and any man or child could buy them as cheaply, or could do just as well with the money, as any expert in the realm of commerce; and that one quality, thoroughly incorporated in his business, brought to him millions on millions of trade. If people did not understand the value of goods, they would go to that establishment and select what they wished, knowing the price would be reasonable, and that their ignorance, if it were known, would have no effect on the price.

That principle ought to be instituted in all business—namely, absolute uprightness and fair dealing; and thus would honesty become the best policy. Honesty and talent will surely win in a business based on the real wants of the people, for dishonest as many people are, their very selfishness will send them to the honest dealer, and there is enough of virtue among men to appreciate and patronize, while they honor fair and honest dealing.

In training the young, the conscience should not only be instructed, encouraged, and guided, but care should be taken not to underrate the upright purpose of the child. He should not be looked upon with suspicion, as if his

conscience were not in exercise, or as if he would cheat and deceive if he could, and take advantage, and tell a falsehood willingly.

Approbativeness and Cautiousness, lying next to the organ of Conscientiousness, readily work with it; and when these three qualities can be brought to act together, when honesty can be set forth as a thing most respectable, and most safe to be done, Conscientiousness has two strong allies.

TRAINING THE SENTIMENT OF HONESTY.

In home and school training there is often to be seen any amount of dogmatic treatment of children. To tell a child fiercely that he must or must not do a thing, may deter him then and there from doing it, more especially if his Cautiousness be awakened in such a way as to fear some threatened consequence. A dog will do the same thing while the master's eye is upon him, or while the uplifted rod of penalty is before him; but such training is not addressed to Conscientiousness, but to Cautiousness, and produces no emotion of ethical duty. A human being, with the God-given faculty of Conscientiousness, may be addressed through the faculty of righteousness, or Conscientiousness, with point and directness, with as much certainty of response from every well-constituted person as from the faculty of ambition, pride, anger, judgment, or love. It may be shown to children, of very early years, that some things are intrinsically wrong, and that such a consideration is reason enough why it should not be done.

In walking through a field in a farming region, one picks a handful of wild strawberries or raspberries; and where orchards are large, and fruit by the cart-load is lying under the trees, one may take a little to eat and not feel that the law of Conscientiousness has been violated. Generally the public sentiment would not regard it as wrong;

but when fruits are sent to the market and sold, and by labor and transportation they have come to be scarce and valuable, the eating of berries at a grocery, as many people permit themselves to do, or the taking of an apple from a stand on the street corner, where it is valued at two or three cents, would be regarded in a very different light. Even water, when transported in casks for miles, becomes a matter of property, the taking of which, without leave, would be a violation of Conscientiousness.

RIGHT USE OF CONSCIENTIOUSNESS.

Covetousness, in regard to the things of others, is condemned by the law of conscience. There are many other ways in which justice may be violated besides those relating to property. One may not steal, or give a false measure, or covet his neighbor's property, and yet be dishonest. The rights of reputation, and of all the conveniences and comforts of life, are as sacred as those of property. I owe friendship and love, kindness and courtesy, and confidence, and a thousand comforting and gentle services, to my neighbor, and when properly enlightened as to my duty and his rights, my Conscientiousness urges me to the fulfillment of every duty. A man may pay his debts, and be a defaulter in many ways. He may rob a neighbor of his good name by declining to speak the truth in his favor when he is assailed. A person may have property, talent, and the means of influence, and yet refrain from using them in favor of virtue and truth as against vice. He may hear the cry of distress, and quietly say, "I am not his keeper," and thereby be guilty of negative murder.

Conscientiousness claims that men shall do right, not merely to refrain from doing wrong. Neglect to do right is sometimes the very worst form of wrong-doing.

Until this faculty shall be brought under normal and judicious training, men in public stations will continue to

violate every canon of morality, and every dictate of duty.

HOPE.

The faculty of Hope belongs to the group of the Moral Sentiments, and serves to beckon man onward to success and joy. It promises him triumph over difficulty, and "a happy issue out of all his trouble." It looks for the favorable and expects the best.



FIG. 38.—BESSIE INGLIS. Hope Large.

All the faculties desire gratification, but Hope gives a promise that all the faculties shall attain their coveted achievements. Pope says: "Man never *is*, but always *to be* blessed."

Those in whom this faculty is deficient are very much inclined to look on the dark side of life. They count the chances adversely to themselves, and never expect anything but trouble, disaster, inconvenience, and unhappiness. When this element is strong, men build castles in the air, promise more than they can realize, and thus get into trouble.

A man with large Hope may be "cast down, but not destroyed." He will keep his eye on the mark, working towards success and triumph. Hope stimulates energy and encourages steadfastness. He is likely to remember all the hopeful proverbs and maxims, such as, "It is a long road that has no turning;" "It is always darkest just before

day ;" "The luck must turn sometime." "Hope on, hope ever."

Persons in whom this element is strong, have generally a cheerful countenance; the eyebrow is raised and the eye dilates. They use superlative adjectives in discussing subjects, and though they are perhaps not well, it is natural for them to reply instantly when questioned as to their health: "First-rate; all right; never felt better." Hope strengthens the man who is ready to perish, points him to immortality, and rejoices in the anticipation of the future. Though he may in the present life go through the dark valley of poverty and illness, hope keeps the heart whole; and he is inclined to say with Job: "I know that my Redeemer liveth, whom I shall see for myself, and not another."

Those in whom this faculty is weak should have it cultivated. Those in whom it is too strong, should be cultivated in the reasoning power and in Cautiousness, and thus modify the enthusiasm which may lead them astray.

SPIRITUALITY.

This sentiment has been called by several names—marvelousness, wonder, faith, moral intuition, spiritual insight, the light within. We use the term Spirituality, because the function of the faculty seems to be to lift a man above things sensuous, material, and mortal, and give a yearning desire for the higher life and that which belongs to the spiritual, the immortal, and infinite. Those in whom it is strongly marked seem to be endowed with faith that does not stop to prune, and trim, and criticise. It takes men at their word, believes in spiritual and moral truth. It brings to the soul "the substance of things hoped for, and the evidence of things not seen." Some persons have a clear, sharp intellect; they analyze, and criticise, and dis-

criminate, and bring everything down to its last analysis, but the moment they are introduced to themes which, to accept, require credulity and faith, they repel them. They are materialists, realists, while he who has large Ideality and Spirituality, believes in wonderful possibilities.

Most inventors have large Spirituality, as well as large Ideality. They have a creative, out-reaching fancy that believes in wonders yet to be revealed, and makes them unwilling to be tied down to the narrow limits of that which is known. They wish to revel in the realm of the unknown. The world owes much to those prophets of invention who sometimes sacrifice comfort and prosperity, and confer on the race those rare discoveries and inventions which elevate and bless the ages. They are called enthusiasts, and sometimes are permitted to want for bread; but their grand-children live to see monuments gratefully erected to their memory.

Some people have given to this faculty a prophetic phase, as if it were the faculty through which prophets received their inspiration. Some people, certainly, seem to have a kind of prophetic tendency. They are always telling what is coming to pass, and they seem to live in the future, in the domain of the unknown. When the intellectual faculties are well developed, we are always happy to see a strongly-marked development of Spirituality, which gives to a man, as it were, wings; while the reasoning power gives him walking ability.

When the faith of childhood is turned aside, and man learns to be skeptical and doubting, we feel that he is either unfortunate in his organization, or has been badly trained. We would cultivate faith and seek to fulfill all the just expectations of faith, so far as we are concerned, so that those who are influenced by us shall be more ready to accept the higher verities of this world, and all that is enduring respecting the great hereafter.

BENEVOLENCE.

The organ of this sentiment is located in the front part of the top-head, and when large it gives elevation to that portion. In some it is uncommonly developed, constituting almost a fault. The name of the faculty expresses its function. To do good, to render assistance, and confer favor; to help the helpless, and make everybody happy so far as possible, is the office of this faculty. We are commanded to "do justly, love mercy, and walk humbly," recognizing first, Conscientiousness, secondly, Benevolence, and thirdly, Veneration; and there is another injunction, namely, to "live as seeing Him who is invisible," which brings into the foreground the faculty of Spiritnality, and also that of Hope.



FIG. 39.—REV. DR. SAWYER. Benevolence Large.

The history of the "good Samaritan" illustrates Benevolence, and the want of it in him who "passed by on the other side." There are a thousand ways in which this feeling can be cultivated. Gentle words awaken it; beneficent smiles give it pleasure and activity; kindly phraseology keeps it on the alert; and the simple, delicate gifts, that cost little or nothing, will awaken emotions in the receiver that will last a lifetime.

If the world would be happy, let Benevolence be exercised, and it will awaken Benevolence in all who come within the sphere of its influence. It is one of the powerful influences to be employed in the teacher, in the government of the school; hence, a kindly voice, a pleasant face, a smile, awaken gentleness, by arousing the faculties

of Benevolence and Friendship, and pupils may thus be molded at pleasure.

The feeling of Benevolence appears to be possessed by several of the lower animals, in whom kindness is not a mere negation of Destructiveness and Combativeness. The dog expresses kindness and gratitude, which is not the result of friendship, and he possesses, at the same time, powers of anger and fierce severity toward those who molest his master or his property. The noble Newfoundland dog eagerly plunges into the sea from a ship's deck, to save his little human friend who has fallen overboard, and he is not wanting in the disposition to punish those who insult or abuse him.

VENERATION

Relates to the existence of God, or a Supreme Being. It raises one of the most profound questions among men. Though the eye does not see Him, nor the hand handle Him, though there is no sentient being within the scope of our observation which is not subject to man, yet the human race, wherever found, seems to be in possession of a sentiment that there *is* a Supreme or Superior Being. Man worships nothing that he sees; he feels himself to be lord of the visible creation, yet he instinctively recognizes a something superior to himself that is worthy of his profoundest veneration and worship.



FIG. 40—REV. DR. R. S. STORRS
Veneration Very Large.

Phrenology recognizes an organ for the manifestation of this sentiment, which is located exactly in the center of the top of the head, and when large, gives fullness and

elevation to the head in that region. Veneration, in the human mind, is a sentiment, not an intellectual power; and though mental philosophers generally seek to prove the existence of a God through intellectual methods, phrenologists never think of proving the existence of a sentiment, or an affection, on an intellectual basis; though intellect may corroborate the sentiment, the sentiment is really the primal element to be considered. The love of mothers for their children is not in proportion to their intellectual vigor. There is many a woman—stately, serene, and dignified—having intellect enough to grapple with the problems that relate to the physical or moral universe, but being feebly endowed in the maternal instinct, or element of parental love, she casts off her child, or assigns it to other hands than her own, and never feels the yearning tenderness of motherly affection. Phrenology would instantly recognize and point her out as being deficient in this respect, though not at all deficient in intellect.

The same facts pertain to the organ and sentiment under consideration. The devotional tendency is not measured by intellect, or a want of it. Veneration does not tell us what to worship or what to reverence; it simply produces an emotion, leading us to respect whatever is great, powerful, or good. This is the foundation of the sentiment of piety or religion, and such a sentiment is found to exist in every tribe of men yet discovered. Heathens worship things which their own hands have made, or are supposed to do so; but they tell us, when we find out their opinions, that they regard these objects, before which they bow, as mere symbols of power, goodness, and greatness; that their minds look beyond the thing which only reminds them of the great power. People of the Protestant religion often accuse Catholics of worshiping the Cross and the Virgin; but they tell us that the Cross but serves to remind them of the dying Christ, and that the Virgin is regarded

by them as a friend, who may intercede in their behalf.

This sentiment also produces the element of filial love and reverence for parents. To a little child, father and mother occupy the position of God. The poet Burns tells us that "Man is the god of the dog." In glowing terms he describes its fidelity and submission to the will of his master, and says that if men were half as faithful to God as the dog is to his master, the world would be greatly elevated in this respect. Mr. Combe remarks, "It is a groundless terror to apprehend that religion will ever be extinguished, or even endangered, by the arguments or ridicule of the profane, because nature has implanted the organs of Veneration and Wonder (or Spirituality) in the brain, and the corresponding sentiments in the mind. Forms of worship may change, and particular religious tenets may now be fashionable, and subsequently fall into decay; but while the human heart continues to beat, awe and veneration for the Divine Being will ever animate the soul. The worshiper will cease to kneel, and the hymn of adoration to rise, only when the race of man becomes extinct."

Veneration, as we have said, does not teach us what we are to worship, but it incites us to worship whatever the other faculties aid us to recognize as great, good, or wise; in short, it leads us to reverence superiority, and God is the embodiment of all that is high and superior. The faculty of Parental love inspires the mother to love her offspring first and best. But parental love does not enable the mother to determine which is her own child. If her child were exchanged for that of another, each of the mothers would cling to the babe which she supposed to be her own, and love it with all her motherly tenderness; but if, at some subsequent period, she could be convinced, through the action of her intellect, that the child

she was loving as her own absolutely belonged to another, and if her own child were pointed out to her, she would, doubtless, transfer her love from the alien child to her own, but she would still feel tenderness for the child she had so long nursed. Veneration can be misled in like manner. Is it strange that a child, until he learns better, pours out his reverence devoutly before an altar consecrated to a false deity? But when his judgment is instructed, he will employ the same faculty of Veneration with equal fervor, but in a different direction and toward a different object.

Politeness and respect toward superiors are among the manifestations of the faculty of Veneration. Age, superior learning, wisdom, or goodness naturally awaken its activity. But in this republican country the faculty of Veneration requires more culture than in a country where accepted and organized distinctions exist in society —where lords and nobles, and confirmed habits and usages, which excite Veneration, are existing on every hand. With us, where each man is equally free, and every post of honor and emolument is open to all who have the talent to exert a sufficient influence to obtain it, Veneration is likely to become perverted. One is apt to look upon those who are superior to him as being in some way his rivals and enemies; and when Veneration is suppressed in its action toward superior people, it is very likely to be eclipsed in its action toward the Supreme Being.

YOUNG AMERICA IRREVERENT.

It is not, therefore, strange that Young America, at the age of twelve, speaks disrespectfully of "the old folks," and inclines to assume, in the society of his friends and parents, an attitude in conduct and conversation unsuited to one of his age. Hence children in a Republic are very apt to become pert, saucy, and independent; and nearly

all foreigners think American children are less respectful and deferential to superiors than is necessary and proper. In monarchical countries, the people seem to have a sincere pride in looking up to their rulers and recognizing "the divine right of kings," and in talking in terms of the highest respect of their nobles and superior classes. Hence it seems to them natural that there should be a State Church as well as monarchical institutions of government and learning.

Politeness among people, especially of the younger toward the older, is one of the methods of cultivating the faculty of Veneration, especially as it acts in social life. In France, politeness is much more attended to than in most countries. It forms a great staple in the intercourse of the people, and even little girls, who are rag-pickers, address each other in terms of respect and deference. A girl of ten years of age will address one who is six years old as "Mademoiselle," while the younger will look up to the one who is ten or twelve and call her "Madame." If rag-pickers do this, what should we not expect in the way of courtesy and politeness among that portion of her people who have better opportunities and higher culture?

The Jewish people have the organ of Veneration largely developed both in head and character. Their religious history, developed in the Old Testament, evinces this trait in a high degree, especially in their frequent references to "the God of their fathers," and "The God of Abraham, Isaac and Jacob." The woman at the well showed the same reverent spirit, when she asked the question, "Art thou greater than our father Jacob, who gave us the well, and drank thereof himself, and his children, and his cattle?" This people, wherever scattered, pay profound reverence to parents and to all aged persons, and the crime of parricide is said to be unknown among them.

About the year 1870, a wealthy Jewish gentleman, named

Nathan, was murdered in his own house in the city of New York. As two of his sons were residing in the house with him, it was suggested that the sons might have committed the dreadful deed. But the bare mention of it struck the whole Jewish population with horror. They said it was impossible for a Jew to slay his parent. We often notice with pleasure that young persons of that faith promptly rise in a street car to give an elderly person a seat.

This organ, like all others, is liable to abuse. When it is not subjected to the guidance of reason and conscience it may produce a blind bigotry for old customs and absurd institutions, provided they are sanctified by time. It may grow into reverence for great names, and authorities in matters of religion and philosophy, and then it often presents obstacles to the propagation of new and important ideas. Those in whom it is weak are observed to be ready to adopt new ideas. Those in whom it is strong adhere to old customs because they are old. Where Veneration is small there is some danger of excessive radicalism, which leads men to ignore the "line of safe precedents."

RELIGIOUS CONSERVATISM.

Those nations which are most religious, which have most of service and ceremony, whose usages have been rendered venerable by time and the unquestioning consent of ages, are very apt to hold themselves aloof from new and progressive ideas. Scientific discoveries are not adopted readily by such people, especially if those connected with the priesthood stand at the head of educational institutions. Astronomy suffered, or rather those who undertook to introduce it, by the bigotry of those who were the most religious. But scientific truth, whether it relate to astronomy or mental philosophy, is certain to be accepted, sooner or later; and we ought to remember that the Author of nature and of true religion is the same, and that

neither can be at war with the other. Dr. Gall said wisely and well, that "True religion is central truth, and all knowledge, in my opinion, should be gathered around it."

On the other hand, people who are loose in their religious views, who have but little Veneration to lead them to some central system of respect and devotion, are much inclined to take the opposite extreme and adopt new notions without sufficient investigation; yet they adopt that which seems to be true without hesitation, and thus are always in advance of conservative people in matters of reform and progress; but they are liable to adopt, without sufficient criticism, that which ultimately proves fallacious.

RELIGIOUS EMOTION NOT INTELLECT MERELY.

Another great error of skeptics and critics is, that they try to prove religion by intellectual argument. A mother's love, or a lover's affection, can not be substantiated in any such way. It is a sentiment, an emotion, that will act with or without reason, or against reason—which can not be put down by argument, nor proved by logic. A feeling or an emotion is one thing, and an intellectual faculty is another. We can prove mathematics by the exercise of the mathematical faculties. We can prove many of the laws of nature by argument, by scientific forms of thought; but fear, hope, sympathy, ambition, pride, conscience, love, hatred, or malice will act sometimes in spite of reason, though, as we have said, intellect is designed to be the lamp to light the pathway to all the mental faculties; but intellect can not create love or hope, fear or piety, though it may supplement and aid them.

We would earnestly urge the cultivation of Veneration in the family and the school-room, since, for two or three hundred years in this new, democratic country, every man struggling for individual existence, and making a pathway for himself, without precedent to guide him, and with hardly

enough of it to instruct him, certainly with not enough of it to control him, has become measurably deficient in the faculty of reverence and respect. We cordially commend to our people to cultivate it assiduously for the next hundred years; and we hope, should they ever be likely to make it too strong and active, that there will be a prophet among them who will be wise and strong enough to say, "Hold, enough! It is sufficient!"

SELF-CULTURE.

THE ONLY OPEN DOOR TO THOUSANDS.

Those who have the opportunity of attending school during the years of youth, may well be expected to achieve a respectable standing, if not distinction, in scholarly attainment, through the facilities which public schools, academic and collegiate institutions afford. But there are those who are not favored with these opportunities; they live remote from schools, or they are obliged to work for their own maintenance and to assist in the maintenance and education of others; and some, unfortunately, ignore their opportunities, neglect to attend school or to study out of it.

Every week, bright, enterprising young men of twenty or twenty-five years of age consult us as to what they shall do, and when we prescribe some pursuit which requires at least a fair English education, or even a classical one, they confess their utter inability to adopt our advice because they have no education; not from want of opportunity perhaps, but because they preferred, during their school years, to run the streets, witness base-ball games,

shooting matches, regattas, or in the country to hunt or fish ; and thus wasted their precious time. When such persons reach the age of manhood they awake to the necessities of their situation, and feel obliged to hammer out their living by the dull drudgery of the rudest manual labor. We always tell them, at least such of them as have natural talent for acquiring knowledge by means of self-culture, that they need not despair. Some such men have become great readers, but they read story papers and novels. Some average three hours a day in reading ; indeed they often read when they should be asleep, resting themselves for the toils of the day following. The activity of their minds expressed by the yearning hunger to read, is proof positive that they have the natural tendency to scholarship, which only requires guidance and persistent drill to bear excellent and abundant fruit. If a person at twenty can not read his own name in print, he need not be discouraged ; he may be ashamed to confess his ignorance, but people know it without his confession, and he should be more ashamed to remain in ignorance than to confess, and employ means to get rid of it. Let him be brave enough to make a move for improving his mind. He could find some person in his neighborhood who would be willing to instruct him ; some school-girl, some kindly matron, would be pleased and proud to open to an ambitious and worthy young man the avenue to knowledge, by looking over his lesson-book, while she might be doing the needle-work of the family, and teach him how to spell out the language. Many hundreds of negro slaves, some with gray hair, have thus acquired the rudiments of education, have learned to read, to write, and to cipher ; and certainly a young white man, with sixty years of life before him, has superior motives to acquire knowledge. Those, however, who have learned to read can start on a higher plane.

If a person will devote one solid hour a day to study, that would really be more than one-third of the time, during the year, in which pupils of the public schools are in school. Their sessions last five hours a day, or twenty-five hours a week, for thirty-nine weeks in the year; the rest of the time is vacation, which gives 975 hours for the school-sessions during the year. And if our home student would devote one hour a day for every day in the year, he will have 365 hours of study. We should expect that his Sunday reading would be worth to him, in the way of scholastic culture, quite as much as the study of any other day.

It should be remembered that after the pupil has thus studied grammar, arithmetic, geography, and composition for a year or two, he will be able to advance more rapidly, trading on the capital he acquires daily, and he may venture in a few years on the higher branches of learning. The world is familiar with the name of Elihu Burritt, "the learned blacksmith," who worked on the anvil eight hours a day, studied eight hours, and rested and recreated eight hours; and he thus mastered fifty-two languages, and became the peer of the finest classical scholars in the world.

How many young men who need education sit about the village store, or congregate at the tavern, not to drink perhaps, but to talk and blend their minds, that thereby they may be fed and brightened? What ribald songs, what threadbare gossip about horses and dogs, trotting-matches, coon hunting; or about trashy literature, which serves only to inflame the emotions without enlightening the understanding or strengthening the morals, fills up the time when ignorance and enthusiasm meet.

It may be better to read trash than to permit the mind to become stagnant and stupid; but if the time thus employed were devoted to study, thousands might become eminent scholars. Let young people change from such read-

ing to the study of medicine or law, and devote as much time to it as they now do to trash, and in seven years they might be able to win a diploma for their attainments in one of those professional departments.

Self-culture in many respects is the richest of all, for it has this quality: that it is self-obtained; it is like flesh well worked on. Any horse in health can be fattened, if he can stand quietly in his stall, or walk over his field, and be fed abundantly, and have no work; but the horse that can work every day and take on flesh will have solid fibre and enduring strength.

Some young men buy the current novels at twenty-five cents or fifty cents, and when they are read they are sold by the dozen for old paper. If such moneys were put into a Cyclopedia, which is the cream of a library containing a million volumes, and that cream gathered by scholarly men in all the departments of knowledge, whose work may be considered the concentrated essence of knowledge distilled from all the books in the world—if such a work were procured and used by young men, it would tell on their future power and influence. Many a young man has read hundreds of volumes of stories, has fought the battles with his heroes, has sighed over their defeats and rejoiced in their successes, but he has thereby attained no solid culture. If he were to read in a newspaper an allusion to Charlemagne or Frederick the Great, he would be utterly at a loss to tell when and where they lived, who and what they were, or what they did; but with a Cyclopedia, costing less than a hundred dollars for its sixteen great volumes, he could read half a dozen pages on Charlemagne, or a compact sketch of any other eminent man in the world's history, and ever after be at home in it. That is getting the juice of the subject and being able to depend implicitly on its correctness.

If he had a library of fifty thousand volumes, containing

the history of Charlemagne and others, in bulky works written by partisans, he has not the time to read them; his mind is hungry for knowledge, and his Cyclopedia will give him on almost any subject all that he will need to know. Besides, the Cyclopedia cites books on the subjects treated of, so that if he wish to extend his inquiries on any particular subject, he may do so. We have known men, not a few, who passed their twenty-fifth year just able to read, who have attained to eminence in literature and science by a course of self-instruction.

An active mind hungry for knowledge, or at least mental excitement, will do reading enough in novels in ten years to acquire an excellent education, if the time and reading were properly directed to study. There is, therefore, every encouragement for aspiring and sensible young people to improve their culture by home study, and not feel discouraged at the thought that they have had no privileges of education, or have neglected opportunities that were offered.

How many persons could study three hours every day? In every village there is some wise and good man or woman, a minister, or doctor, or teacher, who would be glad to direct the inquiries of such students, and loan them books even, to facilitate their progress. One American young man was taught by his wife to read, after he was married, and that faithful wife saw him attain to honorable distinction as governor, senator, and president. The history of our country is full of instances in which young men have studied their spelling-books and read law by the light of pine knots at the chimney corner.

If it be objected that volatile and enthusiastic young men and women of twenty can not be expected to make drudges of themselves, by thus devoting their time to books while others are enjoying the pleasures of society, we reply, that those who, without education, talk over for the thousandth time their little round of exploits, become contracted

and barren in their life; whereas if fifty of these young people were to forego, for several years, nearly all the gossiping, social habits incident to their style of life, and would devote themselves to the acquiring of solid culture, they might come together afterward, and their society would be worth having, and those thus improved would be leaders in their vicinity for the next forty years.

This matter of self-culture after the age of maturity may be illustrated by a case that came under our treatment. Two men called for professional examination at our office. When informed that they were laborers, carrying the hod or using the shovel, we suggested that they learn a trade, and they both replied that they had not time; that at twenty-eight years of age it was too late. We replied, "You expect to work at $1.50 or less per day, as laborers, and to work for the next twenty or perhaps forty years. If you get 300 days' work in the year, at $1.50 a day, it would amount to $450.00 in one year. If one of you were to enter on an apprenticeship at bricklaying, you could get at least seventy-five cents a day, which would be $225.00 a year, and at the end of three years you would have earned $675.00, and by economy you could make that support you. The other, working for three years at $1.50 a day, would have acquired twice as much, namely, $1,350.00. At the end of three years more, bringing you up to the age of thirty-four, the mason would have had three dollars a day for three years, and that amount, added to what he earned during his apprenticeship, would enable him to show in the six years $3,375.00 as the total sum earned; and in addition to that he has a trade, which makes him thenceforth in power to earn money equal to two laborers. The one continuing to carry the hod has earned in the same time $2,700.00, and the apprentice has acquired in the six years a trade and $625.00 more than he would have done as a common la-

borer, which is more than a hundred dollars a year more than his friend the hod-carrier has earned in the same time, and henceforth, for thirty years, his earnings will be double; thus, having doubled his resources by a little economy and privation for three years. If for thirty years he can earn $450.00 a year more than a laborer, it will show, without counting interest, $13,500.00," a handsome difference, certainly, between the two.

One of the men, after looking over the figures, replied, "I will do it, and begin to-morrow, for the boss has many times offered me the chance."

Let one young man hunt, fish, play dominoes, skate, and read a story-paper during his leisure, for ten years, and let another of equal talents spend his leisure in reading science and solid literature for the same time, and the difference between them in knowledge and mental vigor will place one of them in positions of honor and trust, and leave the other to wonder why he should be ignored and kept at low, poor-paying, hard pursuits, while his old playmate, with no better school-culture than himself, shall be advanced to places of profitable and honorable public occupations.

Men can not afford to live low down in the scale of being. In this country, at least, there is no impediment to the acquisition of culture. The laws of the States and the customs of the people favor it.

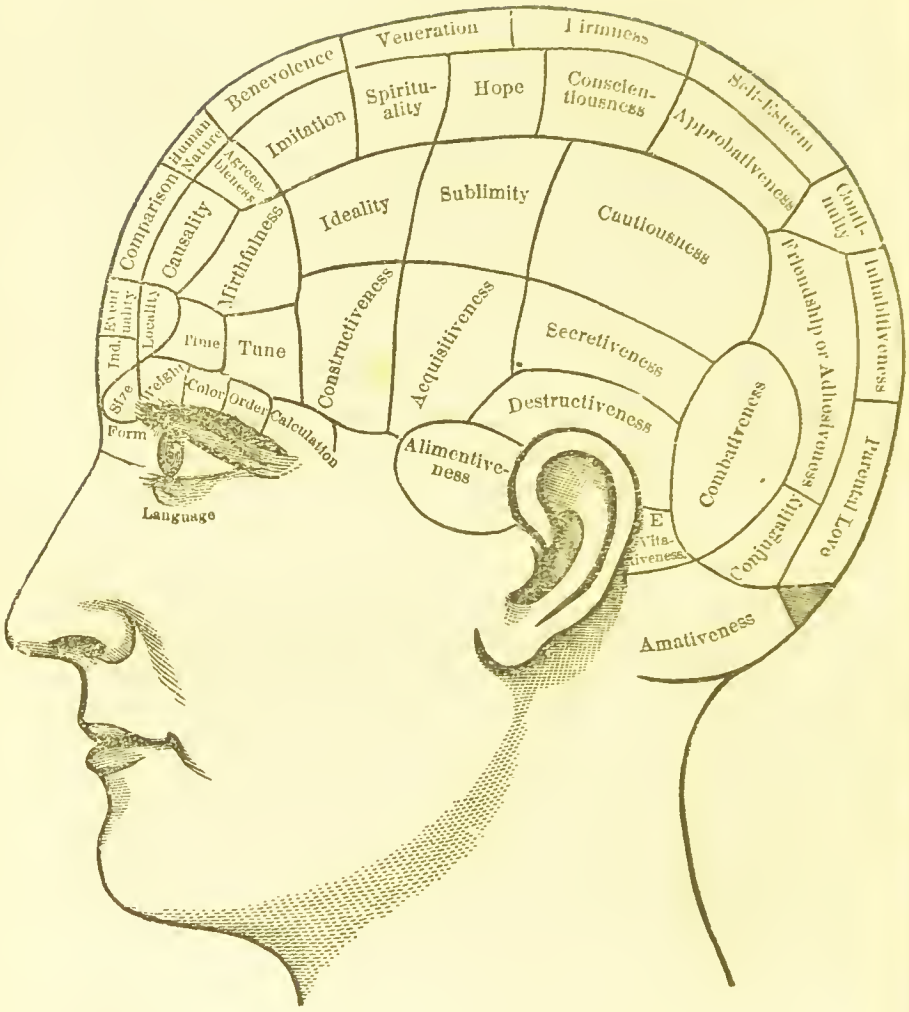
We do not suppose that all who acquire self-culture shall become professional men, but we would have the whole mind of the uneducated people lifted far above its present level.

Why should not a man who mixes mortar undertand the chemistry of the work in which he is engaged? Why should not the bricklayer understand something of mathematics as applied to architecture? Why should any man, because he lays brick or mixes mortar, be nearly as stu-

pid as the bricks and mortar he handles? Why should not the farmer, self-taught, be wise in all agricultural chemistry, botany, and geology, as well as in the labor of raising crops? Why must man know no more of that which lies beyond his line of vision, than the stupid ox he drives? Away, then, with the idea that you must go through life unknowing and unknown, because you have not been educated in your youth.

Patrick Henry had no high scholastic training, but he was a reader and a thinker, and the world will never forget him. Henry Clay did not even have a common school education, but he did not remain in that ignorance. Elihu Burritt might have done like hundreds of other blacksmiths, and continued to hammer out his daily bread by the sweat of his brow over the anvil, and never been heard of beyond the city of Worcester, Mass., where he lived. Let no one, therefore, say at twenty, twenty-five, or thirty years of age, that it is too late for him to acquire education, or to learn a useful occupation. We know a man who graduated in medicine at sixty-two and entered on lucrative practice, and is flourishing to-day at seventy.

Let mechanics improve their leisure in studying the science of their business. Many a sound, but uninstructed man is obliged to be a drudge through life as a subordinate in his trade, who by study might take a better rank in his business and as a man in the community. Any clear-headed carpenter may become a competent architect; every capable machinist may learn engineering; every seaman should try to understand the science of navigation; every merchant's clerk should study book-keeping and finance; and if they can never obtain a controlling position, they may at least secure success and respect in subordinate places. To be poor and dependent is bad enough, but to be ignorant also is unnecessary, and therefore disgraceful and intolerable.



PRINCIPLES OF PHRENOLOGY.

The term Phrenology signifies *discourse on the mind*, and is based on certain definite principles which are as easily understood as the science of chemistry or the laws of natural philosophy.

Phrenology claims to explain the powers and faculties of the mind, by studying the organization of the brain during life. Its doctrines, briefly stated, are:

1. The brain is the organ or instrument of the mind.

2. The mind has many faculties, some of which may be stronger or weaker than the rest in the same person.

3. Each faculty or propensity of the mind has its special organ in the brain.

4. Size of brain, if the quality be good, is the true measure of its power. The brain, when deficient in size, or low in quality, is always connected with a low degree of mental power. Among the lower animals the brain is found to be large and complicated in proportion to the variety and strength of the faculties.

5. Organs related to each other in function are grouped together in the brain. For example, the organs of intellect are located in the forehead; those of the social nature in the back-head; those of passion, appetite, and self-preservation in the side head; those of aspiration, pride and ambition, in the crown; and those of sentiment sympathy, morality, and religion, in the top-head.

6. As each function of the body has its specific organ, so each faculty of the mind, each sentiment and propensity, has its own organ. If this were not so, each person would exhibit the same amount of talent or power on all subjects, such as arithmetic, language, music, mechanism, memory, reasoning, love of property, courage, prudence, pride, etc. Everybody knows that persons rarely show equal talent on all topics. A man may be a genius at one thing, and find it impossible, by long training, to become even respectable in other things. This would not be the case if the mind were a single power and the brain a single organ. As the senses of seeing, hearing, tasting, smelling, etc., are not always possessed by each person in an equal degree of perfection—these several powers being dependent on different organs—so the mental faculties and dispositions are sometimes very unequal in a given person, owing to the greater strength or weakness of their respective organs in the brain. Partial genius, partial idiocy, and partial insanity sustain the phrenological theory of the mind.

7. The quality or temperament of the organization determines the degree of vigor, activity, and endurance of the mental powers. These temperaments are indicated by external signs, including the build, complexion, and texture.

There are three temperaments, known as the Motive, Vital, and Mental.

THE MOTIVE TEMPERAMENT, corresponding to the *Bilious*, has a strong bony system, an abundance of muscle, dark wiry hair, dark eyes, rough, prominent features, dark complexion, and a great disposition to locomotive effort.

The Motive Temperament, in its influence on mental manifestation, is favorable to dignity, sternness, determination, power of will, and desire to govern and control others. It gives slowness of passion, desire for heavy labor or large business, and a liability to miasmatic diseases. (See fig. 4, p. 39.)

The VITAL TEMPERAMENT is evinced by large lungs, a powerful circulatory system and large digestive and assimilating organs, abundance of blood, and animal spirits. The form is plump, the limbs rounded and tapering, the complexion light or florid, with an inclination to take on flesh as age advances. This temperament is a combination of the *Sanguine* and the *Lymphatic*, as set forth by Mr. Combe and other writers; but as the digestive and assimilating organs, which constitute the Lymphatic Temperament, together with the respiratory and circulatory systems, which constitute the Sanguine Temperament, are really VITAL organs, we regard their combination into one, under the name of VITAL TEMPERAMENT, as both convenient and philosophical. (See figs. p. 40)

THE MENTAL TEMPERAMENT (formerly called Nervous) depends on the development of the brain and nervous system, and is indicated by mental activity, light frame, thin skin, fine hair, delicate features, and large brain as compared

with the body. It imparts sensitiveness and vivacity to the mind, a disposition to think, study, or follow some light and delicate business. (See fig. 6, p. 42.)

The structures which, in excess or great predominance, determine these temperaments, exist in each individual. In one person one temperament may predominate—in the next, another. They can be modified by proper training.

DEFINITION OF THE MENTAL FACULTIES.

DOMESTIC PROPENSITIES.

This group of organs is located in the back-head, and gives length and fullness to the head backward from the ears.

No. 1, Amativeness—The faculty of physical love lends attractiveness to the opposite sex, and a desire to unite in wedlock and enjoy their company. *Excess:* Tendency to licentiousness. *Deficiency:* Indifference to the other sex.

A, Conjugal Love—The monogamic faculty, giving a desire to reciprocate the love of *one* in matrimony. *Excess:* Morbid tenacity of attachment; *Deficiency.* Aversion to permanent union; domestic vacillation.

No. 2, Philoprogenitiveness—Parental love: the parental instinct. Disposes one to give due attention to offspring and pets. *Excess:* Idolizing children spoiling them by indulgence. *Deficiency:* Neglect of the young.

No. 3, Friendship—Adhesiveness; the social feeling; desire for companionship; attachment; devotion to friends. *Excess:* Undue fondness for friends and company. *Deficiency:* Indifference to friendly or social interests.

No. 4, Inhabitiveness—It gives a desire for a home, place of abode, or haven of rest. It also gives rise to love of country, and offensive nationalism. *Excess:* Undue exalting of one's own country and home. *Deficiency:* A roving disposition.

No. 5, Continuity—Gives undivided and continued attention to one subject until it is finished. *Excess:* Prolixity; absence of mind. *Deficiency:* Excessive fondness for variety.

THE SELFISH PROPENSITIES.

These organs give wideness of head above and about the ears.

E, Vitativeness—The love of life; a desire to exist. *Excess:* Great clinging to life; dread of death. *Deficiency:* Indifference to life or the care of it.

No. 6, Combativeness—Defense; courage; force of character; energy and indignation; belligerency. *Excess:* A quick, fault-finding, contentious disposition. *Deficiency:* cowardice, inefficiency, tameness.

No. 7, Destructiveness—Executiveness; thoroughness and severity. *Excess.* Cruelty; vindictiveness. *Deficiency:* Inefficiency; a lack of fortitude under trial.

No. 8, Alimentiveness—Desire for food; appetite. *Excess:* Gluttony; intemperance. *Deficiency:* Want of appetite; indifference in regard to food.

No. 9, Acquisitiveness—Desire for property; it is the principal element in industry, economy, and providential forethought. *Excess:* Selfishness; avarice; covetousness. *Deficiency:* Want of economy; wastefulness; prodigality.

No. 10, Secretiveness—Concealment; policy; the conservative principle; aids Acquisitiveness in the retention of wealth. Misdirected, or in *Excess*, it is a prime element in hypocrisy, double-dealing, and evasion. *Deficiency:* Want of reserve, or proper tact; policy; concealment.

No. 11, Cautiousness—Fear; prudence; apprehends danger; is anxious, an sometimes timid and irresolute. *Excess:* Cowardice; timidity. *Deficiency* Heedlessness; recklessness; imprudent haste; disregard of consequences.

ASPIRING GROUP.

Located in the crown of the head, and gives elevation upward and backward from the ears.

No. 12, Approbativeness—The desire to please, to gain admiration and popularity. This faculty is of great importance in social life. It gives to the person a desire to cultivate the amenities of social intercourse. *Excess:* Vanity; undue sensitiveness to praise or blame. *Deficiency:* Disregard of the opinions of others.

No. 13, Self-Esteem—Dignity; governing power; independence; the manly and commanding spirit. *Excess:* Arrogance; imperiousness. *Deficiency:* Self distrust and depreciation; a lack of self-assurance.

No. 14, Firmness—Steadfastness; perseverence; stability; decision; tenacity of purpose; determination; capacity to endure. *Excess:* Stubbornness; obstinacy. *Deficiency:* Instability; unsteadiness; with "no will of his own."

MORAL SENTIMENTS.

This group gives height and fullness to the top of the head.

No. 15, Conscientiousness—Justice; moral sentiment; self-examination; integrity; scrupulousness in matters of duty and obligation. It inclines one to hold to his convictions; to be "JUST, though the heavens fall." *Excess:* Censoriousness; great scrupulousness; self-condemnation, and undue censure of others. *Deficiency:* Indifference to right or wrong; equivocation.

No. 16, Hope—Looks to the future; buoys the mind with enthusiastic expectations of the yet-to-be. In *Excess*, renders one visionary and extravagant in expectations. *Deficient:* Gives the tendency to despondency, sadness, and gloom.

No. 17, Spirituality—Faith, trust, an intuitive religious element, leads to prophecy, and the belief in the immortal and invisible. *Excess:* Superstition; fanaticism. *Deficiency:* Skepticism; incredulity.

No. 18, Veneration—Reverence for Deity; desire to adore and worship; it also imparts deference for superiors, and respect for whatever is ancient or honorable. *Excess:* Idolatry; undue deference for persons. *Deficiency:* Disregard for things sacred, and for the aged and venerable.

No. 19, Benevolence—The desire to do good; tenderness; sympathy; charity, liberality, and philanthropy. *Excess:* Morbid generosity. *Deficiency:* Selfishness; indifference to the wants of others; lack of kindness and sympathy.

PERFECTIVE GROUP.

Located in the region of the temples, giving width and fullness to that part of the head.

No. 20, Constructiveness—The mechanical, planning and tool-using faculty. It aids in the construction of pictures, poetry, lectures, books, garments, houses, ships, schemes, and in all manual or mental dexterity, and aids the inventor. *Excess:* Attempting impossibilities, impractical contrivances, perpetual motions. *Deficiency:* Inability to use tools; no mechanical skill or aptitude.

No. 21, Ideality—The esthetic faculty, or love of the beautiful and perfect. It is essential in poetry, in literature, the arts, and all that is refining and pure. *Excess:* fastidiousness; romance; dreaminess. *Deficiency:* Lack of taste.

B, Sublimity—May also be called an organ of the imagination. The stupendous in nature or art excites this faculty highly. In *Excess*, it leads to exaggeration. *Deficient:* It shows inability to appreciate the grand or majestic.

No. 22, Imitation—The copying instinct. It adapts one to society by copying manners. It helps the actor in representing character, and is one of the chief channels by which we obtain knowledge and benefit by surrounding influences. *Excess:* Mimicry; servile imitation. *Deficiency:* Oddity; eccentricity.

No. 23, Mirthfulness—Wit; humor; love of fun. It aids reason by ridiculing the absurd and incongruous. *Excess:* Improper ridicule of subjects. *Deficiency:* Excessive sedateness; indifference to wit and humor; can not appreciate a joke.

PERCEPTIVE ORGANS.

These give great fullness and prominence of the lower part of the forehead and length of head from the ears to the brows.

No. 24, Individuality—Observation; desire to see things and identify points of thought; memory of objects. The knowledge-gathering disposition. *Excess:* Prying curiosity and inquisitiveness. *Deficiency:* Dullness of observation.

No. 25, Form—Gives width between the eyes, and ability to remember countenances, and the outline shapes of things. It has to do with drawing and working by the eye. *Excess:* Undue sensitiveness to want of harmony in shapes. *Deficiency:* Forgets faces and forms, can not cut or draw with skill or accuracy.

No. 26, Size—Power to measure distances and quantities by the eye; also the weight of animals, or other objects by size. *Excess:* A constant comparison of size and proportion. *Deficiency:* Inability to estimate size and distance.

No. 27, Weight—Adapts man to the laws of gravity, whereby he walks erect and with grace and balance, rides a horse, balances and judges of the weight of things by lifting them. *Excess:* Disposition to climb and attempt hazardous feats of balancing; rope walking. *Deficiency:* Inability to judge of the perpendicular, or to keep the center of gravity.

No. 28, Color—This faculty enables us to discriminate hues and tints, and remember colors. *Excess:* Great fondness for colors; fastidious criticism of tints *Deficiency:* Inability to distinguish colors; "color blindness."

No. 29, Order—Method; arrangement; system; neatness. When large it makes one very neat, tidy, and methodical. *Excess:* Undue neatness. *Deficiency:* Slovenliness; disorder and general irregularity.

No. 30, Calculation—The power to enumerate, reckon, etc. *Excess:* Disposition to count and "reckon" everything. *Deficiency:* Lack of talent in relations of numbers; can not add, subtract, or multiply.

No. 31, Locality—The exploring faculty; love of travel, and ability to remember places. *Excess:* An unsettled, roving disposition. *Deficiency:* Poor memory of places; liability to lose the way.

LITERARY FACULTIES.

These are located across the middle of the forehead and serve to give roundness and fullness to that region.

No. 32, Eventuality—The historic faculty. Some people "talk like a book;" are full of anecdotal lore, can relate occurrences, and have a good memory. *Excess:* Tedious relation of facts and stories. *Deficiency:* Poor memory of events.

No. 33, Time—Gives a consciousness of duration; tells the time of day; aids the memory with dates and music. *Excess:* Undue particularity in matters relating to time; drumming with the foot or hand in company, to mark time of music. *Deficiency:* Fails to remember dates or keep time; fails to keep engagements.

No. 34, Tune—The musical instinct; ability to distinguish and remember musical sounds. *Excess:* Disposition to sing, whistle, or play at improper times and places. *Deficiency:* Inability to distinguish or appreciate music.

No. 35, Language—Located in the brain above and behind the eye, and when large forces the eye forward and downward, forming a sack, as it were, under it; when the organ is small, the eye appears to be sunken in the head, and this sack like appearance does not exist. *Excess:* Redundancy of words; more words than thoughts or ideas; garrulity. *Deficiency:* Lack of verbal expression.

REASONING ORGANS.

These are located in the upper part of the forehead and give fullness, magnitude, and squareness to that part. Length from the opening of the ear to that part must be considered.

No. 36, Causality—The ability to comprehend principles, and to think abstractly; to understand the why-and-wherefore of subjects and things, and to synthetize. *Excess:* Too much theorising and impracticable philosophy. *Deficiency:* Weakness of judgment; inability to think, plan, or reason.

No. 37, Comparison—The analyzing, criticising, illustrating, comparing faculty. It enables one to use figures of speech, similes, parables, proverbs, etc. *Excess:* Captious criticism. *Deficiency:* Inability to reason by analogy.

C, Human Nature—The power to discern motives, character, and qualities of strangers. *Excess:* Intense personal prejudice; offensive criticism of character. *Deficiency:* Indiscriminating confidence in everybody.

D, Suavity—Agreeableness; tendency to speak and act in a mellow, persuasive manner; to put a smooth surface on rough affairs, and say disagreeable things agreeably. *Excess:* Affectation; blarney. *Deficiency:* Want of ease of manner.

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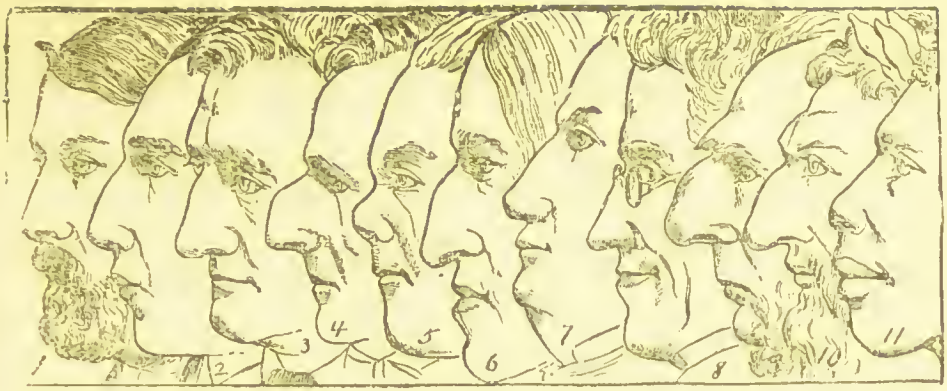
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